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QUARANTINE REGULATIONS.

By THEODORE WALSER, M.D.,

of New Brighton, Staten Island, N. Y.

Read at a Stated Meeting of the New York Academy of Medicine, February 1, 1872.

In considering the question of Quarantine, I am conscious I am addressing the *élite* of the medical profession—men familiar with the literature, ætiology, and modus propagandi of every disease that comes under its provisions; and I shall limit my observations, therefore, to personal experience on a field which is comparatively foreign to the student of Hygiene, and in treating the history of epidemics in New York City, merely refer to them as the causes which prompted the framing of new laws and the initiation of further quarantine restrictions. You will be pleased, therefore, to bear with me if I speak of these laws as an integral part of the question before us, and, in summing up the experience of centuries, make this experience the basis on which to decide the claims of quarantine.

Appalled by the gradual approach of the epidemics of yellow-fever, which had caused such fearful devastation in Charleston and Norfolk during previous years, the first quarantine laws were enacted in the colony of New York by the Lieut.-Governor, Council, and General Assembly in 1758, enacting that "all trading-vessels, transports, and others, having small-pox, yellow-fever, or other contagious distempers on board; and all persons, merchandise, and goods whatsoever, coming or imported in such vessels; and all vessels coming from any place infected with distempers, shall not come into any of the ports or harbors of this city, or nearer to it than the land commonly called Bedloe's Island, and shall be obliged to make quarantine there, or in such other place or places, for such time and in such manner as the Governor, or Commander-in-chief, by and with the advice of His Majesty's Council, shall deem proper and reasonable to direct and appoint; and until such persons, goods, or merchandise shall have respectively performed, and be discharged from, such quarantine, no such persons, goods, or merchandise, or any of them, shall come, or be brought ashore, unloaded, go, or be put on board of any vessel within this colony, or the neighboring colony of New Jersey, unless they shall first be permitted and licensed by order of the Governor or Commander-in-Chief for the time being, by and with the consent of the Council;" making the penalty of infringement of this law £200, and £20 if any infected person was found on board of any vessel without due notice, or if any pilot refused or neglected to obey the provisions of this law.

Whatever may have been the preventive course pursued, no epidemic or disease of any alarming character occurred in New York from this date, although Dr. Chisholm remarks, "that the smell from the ships was in the highest degree offensive, and the police at that time by no means efficient, and putrid substances of every description were accumulated in the ships and every part of the city."

In 1784 it was enacted in the Senate and Assembly, that all vessels having on board any persons infected with yellow-fever, or any other contagious distemper, or coming from any place infected with such contagious distemper, shall not come into the harbor or city lower than Bedloe's Island, and shall perform quarantine there for such time and in such a manner as the Governor, or, in his absence, the Mayor of the City, may direct; and that during such quarantine no person, goods, or merchandise shall be permitted to leave the vessel without the permit of the Governor, or Mayor, of New York. The law further defines the duties of masters and pilots, applies the penalty exacted, as before, for the benefit of the lighthouse at Sandy-hook, invests the Governor with the right of appointing a physician, and specifies his duties, privileges, and compensation.

Yellow-fever prevailed in New York after this to a greater or less extent every year. Of the epidemics of 1791 and 1793 no further account is given than merely stating the number of its victims, and the localities, streets, and wharves where it prevailed. Its origin in 1795 is, however, clearly traced to the brig *Zephyr* from the West Indies; Dr. Treat, the examining surgeon, being its first victim—as is supposed from making an autopsy of a death on board on the day of her arrival in port. Being permitted to go to the wharf, foot of Dover street, she hauled alongside the ship *Williams* from Liverpool, where the disease first appeared among the crew, and a few days later in White near Dover street, extending thence to the adjacent buildings and streets. Every effort was made by Dr. Baily to contradict this statement; using as the strength of his argument that no one of Dr. Treat's attendants and friends was taken sick, and hence it could not have been the yellow-fever. Indeed, the idea of personal infection had so overshadowed the intellect of the profession, that the most important facts were overlooked in the vain search of evidence for it. In the mean time the *Hankey* brought the disease from the coast of Africa to New Granada, arriving on the 18th of March. In the middle of April the disease assumed an epidemic form on the Island; during June and July it swept over the entire Island. From New Granada it was carried to St. Domingo and Jamaica, and thence to Philadelphia, by clothes, and more especially the woollen jackets, of diseased sailors. Vessels from Philadelphia were now quarantined in New York.

In 1796 the first Health Officer and seven Commissioners of Health were appointed, and their duties defined. All vessels with forty or more passengers from any foreign port were made subject to quarantine; the Governor of the State was authorized to issue from time to time proclamations designating the ports from which vessels should be quarantined, and the Health Officer or Health Commissioners were authorized to bring vessels already at the wharf back to quarantine, and to

anchor wheresoever they might direct. £2,000 were appropriated to erect a Lazaretto on Governor's Island for the reception of infectious diseases, and placed under the charge of the Health Officer, and a further sum of £2,000 was appropriated for its maintenance. It was then made obligatory upon every practising physician to report each case of infectious and contagious disease to the Health Commissioners.

By the laws enacted in 1798 the appointment of Health Officer and Commissioners of Health, and their respective duties, were still further defined; all vessels having or having had on board any case of fever, or coming from a port where such fever prevailed, being made subject to quarantine, unless they had been previously in any of our northern ports for a period exceeding ten days.

Dr. Underhill gives the following account respecting the epidemic of yellow-fever which followed in the same year:—

"Some time in July the ship *Fame* is said to have arrived from one of the West Indian islands, and come to the wharf below New Slip, where she lay for some time. About the third or fourth of August some people went to discharge her ballast and to pump her out. Among the ballast was a quantity of damaged coffee, extremely putrid, which, with the water discharged from the pump, was so offensive to the smell that the neighbors were induced to shut their windows, especially while eating. About the sixth of the month, a party dined at the house of a Mr. Mead in the neighborhood, all of whom were taken sick in their respective residences, on the fifth day afterwards, of yellow-fever, and several of them died. The next house above was visited in the same way; three of the inmates were taken sick at the same time, two of whom died. In the second and third houses the inmates shared the same fate." The number of deaths from yellow-fever during this epidemic exceeded 2,000; while in Philadelphia the ravages of the disease were still greater, and, as in New York in the case of the ship *Fame*, were clearly to be traced to the *Deborah and Mary* from the Spanish Main.

Appalled and now fully conscious of the danger, and looking to an efficient quarantine as the only safeguard against its importation, in 1799 the health laws were so amended as to constitute the Health Officer Resident Physician, and members of the Council the Commissioners of Health, with the power to purchase a tract of land on Staten Island for a boarding station and marine hospital. The eastern shore was selected, and some of the buildings were occupied during the autumn. The list of ports from which vessels were subject to quarantine embraced now all foreign and domestic ports south of Georgia, from the 31st of May to the 1st of October. In 1799, while the authorities were still groping in gutters and sinks for the origin of the disease, we find that seventy-four cases of yellow-fever were sent from the city to the Marine Hospital, the disease being confined to Old Slip and the vicinity of the East River.

In 1801 the Health Officer, Health Commissioners, and Resident Physician to the Marine Hospital were constituted the Board of Health of New York, and for the first time the introduction of cargoes and merchandise from infected vessels into the city of New York was prohibited. Cargoes from infected ports had to be discharged by lighters, and the vessel cleaned and fumigated before pratique could be granted. Over seven hundred cases of ship-fever were admitted during the same year, comprising among the number over one-third of the passengers of a brig from Sligo, arriving at this port after a long passage, in a destitute and almost starving condition.

In 1803, out of 1,600 cases 600 died of yellow-fever, commencing in coffee-house slip and its vicinity. The source is not given by any existing record. Nor can the epidemic of 1805 be traced to positive infection and importation of any one vessel; and to attribute it to the landing of a quantity of rags from Leghorn is perhaps as erroneous as the assertion of the Health Officer, that it did not arise from any neglect at quarantine, or came through that channel. The law passed in 1804, providing that no vessel from infected ports should approach nearer the city than three hundred yards, seems then to have been a dead letter.

In 1811 the quarantine laws were revised, and vessels from Asia, Africa, and the Mediterranean, and from any port south of Georgia, the Bermudas, Bahamas, and the West Indies, and all others having forty or more passengers on board, or having had sickness or death while in port or on the passage, were made subject to quarantine during the year; and all vessels from American ports south of Cape Henry were made subject to it from the 30th of May to the 1st of October. Vessels with yellow-fever or any other pestilential disease on board, or hailing from ports where yellow-fever prevailed, were to be unloaded at quarantine, cleaned and whitewashed three times, and to remain at least thirty days in quarantine. No passenger or sailor was permitted to proceed to New York until twenty days after the occurrence of the last case of pestilential disease. Vessels from the West Indies, Africa, and South of Georgia were to remain but four days at quarantine to discharge their cargoes by lighters, and under no circumstances approach nearer the city than three hundred yards; and crafts considered to be dangerous to be removed from the city to the quarantine grounds; cargoes of hides, wool, and cotton to be landed at the public stores at quarantine.

New York remained exempt from the visitation of any contagious disease during the war with England and until 1819, when a few cases of yellow-fever occurred near Old Slip; but by the vigorous exertions of the Board of Health and the blessing of divine Providence, its spread was averted.

In July, 1822, the first case of yellow-fever occurred at the foot of Rector street, attributed to cargoes landed from the *Spanish Soldier* and the *Eliza-Jane* from Havana, although, as usual, its source was sought in churchyards, gutters, and sinks. A fact not to be overlooked is, however, that the same vessel which carried yellow-fever from Key West to St. Augustine, and was the prolific source of the epidemic in St. Augustine, was overhauled at the foot of Rector street, and two of the employés, and five who visited them, were among the first victims of the disease. Of five hundred who had the disease in this year, two hundred and fifty-five died. With this terminated the last of the yellow-fever epidemics, occurring during a period of more than half a century.

The quarantine laws, as last amended, remained nearly the same until 1830, when an act was passed, permitting healthy persons arriving in vessels from infected ports to proceed to the city, but without baggage.

In August, 1831, the Board of Health were first convened to consider the quarantine of cholera, and a commission was appointed to confer with the President, and to memorialize Congress to institute a national quarantine, and aid the authorities of New York in protecting the public against the dreaded visitation of cholera. In response, a communication was received from the General Government, surrendering the use of Fort Lafayette as a depot for goods. A resolution was adopted to land all goods from Russia at the Fort. To

this was added, at a later meeting, all merchandise from Hamburg and Smyrna.

In January, 1832, the appointment of a sanitary commission under the auspices of the General Government was solicited, whose duty it should be either to send some of their own members or other agents to the ports of Europe or Asia, where the disease prevailed, and to collect facts relating to the means of prevention, and remedies to be applied in cases of the disease. In April and June further preventive laws were enacted, and $500 were applied to the purchase of chloride of lime. On the 2d of July twelve cases were first reported to the Board of Health, and a proclamation was issued, assuring the public that the disease was not personally communicable. By the 18th of July the number of deaths from cholera exceeded six hundred. The cholera epidemic of 1832 first appeared in Quebec. A law subjecting to quarantine regulations all vessels from ports of Upper and Lower Canada was passed in 1833, and has remained in force until the present day.

In 1845 a commission was appointed to revise the quarantine laws, but without any special result.

In 1848 a number of infected vessels, government transports from New Orleans and Mexico, were anchored off the old quarantine grounds. After an easterly wind, a quantity of refuse material from these vessels drifted ashore, lodging in Stapleton Basin. In less than a week following, two cases of yellow-fever occurred in the nearest dwelling, and then extended to the adjacent dwellings, and prevailed as an epidemic for half a mile along the shore. Visitors and nurses were attacked; but returning to their own homes in the interior, the disease remained confined to themselves, although surrounded by their families, and in localities much more favorable to the generation and development of miasmatic or contagious diseases than the place where they became infected.

In 1849 $50,000 was appropriated, and a committee appointed to effect a removal of quarantine to Sandy Hook.

In 1855, the year of the memorable epidemic of yellow-fever in Norfolk, Va., New York remained exempt from a visitation of the disease, and but few cases were admitted from shipboard.

In 1856 the quarantine laws were again revised; new and special power was granted to the Health Officer, and by an adroit transposition of the figure 3, the coastwise quarantine was extended from the 1st of April to the 31st of October, instead of from the 30th of April to the 1st of October; and after the different ports of the West Indies, Mediterranean, and coast of Africa, from which vessels were subject to quarantine, "all other ports" were sandwiched in, by which the Health Officer's income was increased from $6,000 to $10,000 per annum.

The epidemic prevalence of yellow-fever at Fort Hamilton, on the shores of Staten Island, and on Governor's Island, during this year, has been so ably and recently described by Dr. Harris, that I need not refer to it.

In 1858 the quarantine hospitals were destroyed, and then an entire change of quarantine regulations was initiated. The Commissioners of Emigration, the legal custodians of the quarantine hospitals, were superseded by Quarantine Commissioners in 1859, and $50,000 were appropriated to defray their expenses. The "Floating Hospital," constructed from the hulk of an old ocean steamer, was anchored in the Lower Bay for the reception of yellow-fever patients, and as a boarding station for the quarantine of vessels from the West Indies, coast of Africa, and American ports south of Georgia.

In 1861 an additional appropriation of $43,000 was made, and—

In 1863 the quarantine laws were so revised as to give the Health Officer additional powers, even to the destruction of cargoes and the submersion of vessels. The employés, stevedores, and lightermen were to be selected by him, but their compensation was fixed by the Commissioners of Quarantine, who were also by this act constituted a Board of Appeal.

In 1864 a further sum of $80,000 was appropriated.

In 1865 the quarantine laws were again revised, but without making any material change; $49,000 additional were appropriated.

In 1866 the Mayors of New York and Brooklyn, in conjunction with the Commissioners of Quarantine, were empowered to construct permanent quarantine buildings in the Lower Bay, and $400,000 appropriated for that purpose. The sale of the old quarantine grounds, with the exception of a boarding station, was ordered, and, by concurrent resolutions, the general government petitioned for hulks and vessels for temporary quarantine purposes.

In 1867, besides further appropriations of $132,000, temporary accommodations for the reception of passengers under quarantine were ordered to be made on "Barren Island," and the west end of Coney Island selected for a boarding station; but during the following session in '68 this law was again repealed, and no further enactments passed by which the quarantine regulations were materially modified.

Over $300,000 have since that time been appropriated for the maintenance of quarantine and the construction of buildings on the island in the Lower Bay, under the law of 1866; only the lower one is prepared to receive patients, while the upper one remains unfinished, and may come "handy," but is certainly erected without special design or purpose.

In reviewing the history of quarantine, and the various laws enacted to protect the community from the introduction and prevalence of contagious diseases, we find that every progressive measure was prompted by a sense of the insufficiency and insecurity under existing laws, and the modification and change of medical opinion in regard to the mode of emanation and propagation of the disease. The quarantine had been removed from Governor's and Bedloe's to Staten Island, and each one in its turn abandoned. At first it was only intended to protect against yellow-fever and small-pox. The swelling tide of emigration, and the prevalence of typhus amongst the masses, introduced the last-named disease as the most prominent danger to be guarded against. Then cholera, appalling and fearful in its destructive march over the continent, called for new and energetic measures of self-protection. And so, patch upon patch was added, meeting each contingency, and providing for every successive emergencies; each disease in its turn engaging the attention of law and medicine, as the danger from its ravages appeared more imminent. The range of ports from which vessels were subject to quarantine was gradually extended, until it finally included all vessels from all foreign ports, and all coastwise vessels from domestic ports south of Cape Henlopen, from the 1st of April to the 31st of October.

Before we consider the mode of propagation and the quarantine of each disease, permit me first to cast a glance upon the topography of ports from which vessels were subject to quarantine in the harbor of New York. I have already mentioned how strangely and surreptitiously "all other ports" have been smuggled in under the laws of 1856. What are the diseases which possibly can excuse a quarantine of merchant vessels from any of our northern ports? Why are vessels from Nova Scotia subject to sanitary restrictions from which

Maine is exempt? and how is it that vessels coming through the sound may and do enter New York Harbor at all seasons, while vessels passing to the eastward of Long Island are subject to visitation? Are there any professional grounds whatever justifying this restriction or infringement on commerce? The same may be said of merchantmen from the west of Europe, which, prior to this interlineation, were not subject to quarantine unless having passengers on board. And yet only a slight, a very slight chance exists of disease prevailing in their ports of departure of which we will not have been apprised; for at an age when we have daily communication with all the world, this can scarcely happen. What can warrant a quarantine from the Potomac, from Washington and Baltimore, which does not apply equally well to Philadelphia? During thirteen years' service in quarantine, I know of only one instance of sickness coming from any of these vessels, and that was a passenger from the interior. Fruits and vegetables, oysters and coal from Virginia, are certainly cargoes which require no quarantine, and I mention this because every quarantine restriction is supposed to rest on medical ground.

YELLOW-FEVER.

The history of yellow-fever has been so thoroughly interwoven, and was in fact so much the originating cause of quarantine, that it is not my intention to occupy your time with the recital of a subject so familiar to all present, but at once proceed to the consideration of quarantine regulations respecting this disease in the port of New York, studiously endeavoring to limit my remarks to the professional merits of the question.

As an efficient quarantine can only be based upon a thorough knowledge of the modus propagandi of the disease, and as this can be our only safe guide between inefficiency on the one side, and unwarrantable exaction and restrictions on commerce and intercourse on the other, I must invite your attention to the consideration of the

I. *Nature and characteristics,*
II. *Means and mode of portation,*
III. *Mode of infection* in yellow-fever, and
IV. *The quarantine regulations* now in use, and necessary to prevent the introduction and prevalence of this disease in the port of New York.

I. *Character and Nature of Yellow-Fever.*—As long as we are unable tangibly or ocularly to demonstrate the bioplasma, or disease germ, or actually know what constitutes the morbific cause of the disease, we must content ourselves in its conception with analogy and inference, and by this we are unmistakably led to believe that the yellow-fever virus is of cryptogamic origin. This theory assumes practical form when we consider the chemical action of fungi of all kinds upon the air; their subsequent deleterious influence upon animal life; and the conditions of their generation and growth —heat, moisture, and darkness, with their corresponding means of extermination—air, thorough ventilation, light, and cold. As time will not permit us to enter upon theories, and as facts alone can be considered a safe basis on which the study of the character and nature of yellow-fever can be prosecuted, we mention, as its first and most prominent law of existence, a continued temperature of 85° and over. Exotic in its origin, indigenous only to the tropics, yellow-fever cannot exist in our latitude except during the summer months, and with the advent of every frost becomes exterminate.

With Dr. Rush the last advocate of the domestic origin of yellow-fever has passed away; and not only in New York, but scarcely in any of the gulf ports can a man of eminence be found who is not convinced that yellow-fever *cannot* originate *de novo* in any ports of the United States, but is *always the result of importation from abroad.* During the war the most insalubrious ports remained exempt from its visitation, and this less on account of an efficient quarantine, or internal sanitary regulations, but because commerce and intercourse with infected districts was partially or entirely cut off.

II. If not indigenous, yellow-fever is necessarily a portable disease, and its portation must either be

a. *by persons* laboring under the disease, and reproducing the morbific germ; or,
b. *by things, fomites,* ships, merchandise, personal effects, transmitting the germ in its maturity.

a. By persons.—The difficulty of separating effect from cause, and our inclination to draw our indications from the visible, perceptible, and tangible, have necessarily led the inquiring mind to look to the yellow-fever patient as the means of portation and communication, and thus to overlook the most important facts connected with the transmission and development of the disease. A clear interpretation of the experience of a century, and much negative evidence prove, however, beyond a doubt, that persons and their eliminations have *no* agency in the matter; for not a single case can be traced beyond the source of infection, though thousands have fled during every epidemic from the stricken district, or the exposure to fomites, to be nursed and cared for where prior to their arrival no case of the disease existed.

From the opening of the Quarantine Hospitals in 1798 to their destruction in 1858, over 1,200 cases of yellow-fever were treated, and not a single instance is on record in which the disease was communicated from the sick and their eliminations, to patients admitted with other diseases; while the introduction of cholera was almost invariably followed by the development of similar cases among the other patients. Over 200 patients have since been treated in the Floating Hospital, and yet not one of the employés ever took the disease. Assuming, then, as an incontrovertible truth, that *persons cannot* be the carriers of yellow-fever virus, it necessarily devolves upon inanimate matter—*vessels* and *fomites*—as the only remaining media of transportation from its original or acquired habitat. I may cite as evidence in proof, the history of every yellow-fever epidemic, both on this continent and in Europe, in which the disease could be traced to these things alone, although local causes may have contributed to its inception and development.

b. By things.—That *vessels* may become infected, and the floating habitat of a local epidemic, is corroborated by the experience of every year, and the only questions before us are: Its *source,* or the condition of the port of clearance requisite for, *and the condition of vessel and fomites* favoring, the inception and infection by yellow-fever virus.

Ports.—Yellow-fever may prevail as an epidemic, appalling and intense, or the occurrence of a few sporadic cases may simply indicate the presence of the virus; although the former almost insure infection, the latter by no means excludes the possibility. The *Alabama* was infected by yellow-fever at Key West, where its presence was not even known to the commander. The port may be land-locked, surrounded by swamps and decaying vegetable matter, as at Havana; or an open roadstead, as Campeche, Tampico, and the probabilities of infection may be correspondingly less. Again, the vessel may be loaded by lighters, or at the wharf, the former not excluding, the latter certainly favoring, the probabilities of infection.

Vessels.—Old vessels are invariably more liable to infection than new ones, to whatever we may attribute

this predilection; and that a local cause exists we may infer from the fact that we have vessels of bad repute, once the habitat of infection, and under similar circumstances more than likely to be again, although others may escape. The *James H. Glidden*, *Julia Halleck*, and *Susquehanna*, are instances; in each yellow-fever had prevailed repeatedly. Repeated observations also show that human effluvium favors the infection of vessels with the specific virus of this disease, as it does the occupants of crowded passenger ships and prisons with typhoid. Yellow-fever occurs much more frequently on board of men-of-war than in any other class of vessels, notwithstanding the severe and constant attention to cleanliness and ventilation which the sanitary discipline imposes. The names of the *Buzzard*, *Enterprise*, *Susquehanna*, *Alabama*, and *Tahoma* stand pre-eminent in our quarantine records of yellow-fever. By a passenger ship the disease was first introduced into the West Indies. The ship *Deborah*, a British transport from St. Thomas, carried the disease in 1798 to New York; and the only infected vessels which arrived here during the summer of 1862 were Coolie vessels, which had discharged their living freight in Havana, while not one of the Havana packets or ordinary traders appears to have suffered by the prevailing infection of the Port.

Fomites.—The portation of yellow-fever virus by fomites, by railroads and other conveyances than infected shipping, cannot be the subject of quarantine regulations, and is of at least questionable occurrence. During the terrible epidemic in Norfolk, thousands came by rail to every city in the union, and I am not convinced of the occurrence of any case from persons or things brought thence.

III. *Mode of Infection.*—Yellow-fever may extend from the infected vessel—

1. *By contiguity,*
2. *By winds,*
3. *By fomites.*

1. *By contiguity.*—To the law of contiguity we may attribute the prevalence of every yellow-fever epidemic in New York, commencing invariably in slips, docks, and streets nearest to the focus of infection, until the approach of infected vessels was prohibited by laws, and in its efficient administration the introduction and prevalence of the disease prevented. What may still occur in the absence of such preventive measures we may infer from the history of St. Nazaire, in France, in 1861, when the *Anne Marie* arrived from Havana, having lost two of her crew by yellow-fever. On board of three vessels moored close to her the crew sickened in the order of their proximity not only, but while the vessel moored nearest to her lost four out of five, the third lost only one in seven of her crew.

2. *By winds.*—Whatever may be the nature of yellow-fever virus, its specific gravity is obviously greater than air,—as this alone can fix it to the vessel,—and virulent in the degree of its density. The lower the stratum the more poisonous its influence. That by discharging and ventilating, the virus is dislodged and set free, we see in its effect upon the lightermen receiving cargo or ballast, and persons bathing in the immediate vicinity of discharging vessels. The extension of this virus so liberated, and by its specific gravity floating on the surface of the water, certainly cannot be limited, except by attenuation; and if the formative elements are found upon the water, or, drifted by wind and wave on shore, it finds the matter or formative element on shore, it will, under circumstances resembling its tropical habitat, necessarily generate and develop. The epidemic on Staten Island in 1848, on Long Island and Staten Island in 1856 and 1858, each occurring after continued winds from the fleet of infected vessels, may be solely attributed to this mode of infection; while the epidemics on Governor's Island, occurring in 1856, 1858, and 1870 in the same locality, the point nearest the Atlantic dock, where cargoes from vessels at quarantine were constantly received, was unquestionably due to the liberation of yellow-fever virus from these cargoes drifting on the surface, until it found on the shores of the island, or the débris floating near its shores, the requisite formative elements. This drifting, as snow in winter, may also account why a fence, a row of dwellings, an artificial barrier will arrest the progress of the disease; and why the north side of Rotten Row suffered while the south side remained exempt; on Staten Island the houses fronting the bay were infected, while others adjoining, fronting inland, remained exempt.

By fomites.—These may be either *materials floating* NEAR, or the *cargo*, *dunnage*, *and personal effects* FROM the infected vessel.

We have unquestionably in the floating material the most prolific source of infection. This may or may not be from the infected vessel, but débris, decomposing porous substances constituting the formative element for the floating virus, under circumstances most closely resembling its tropical habitat.

The straw taken from the Bay by the first victims on Fort Hamilton, the mattress at Gowanus, were such; though neither could be traced directly to an infected vessel.

Cargoes.—To prove the infection by cargoes is extremely difficult, because isolated cases are apt to be misunderstood, or hushed up under the apprehension of public alarm, or reproach for official negligence. In 1822 the epidemic was attributed to a quantity of sugar stored at the foot of Rector street. Custom-house officers were reported sick of yellow-fever while employed at the Atlantic Dock, Brooklyn, in 1856; and Sleight, a custom-house officer not connected with quarantine, is said to have died of yellow-fever in 1848.

The law makes distinction in cargo and the character of "fomites" liable to carry disease, which is perhaps not wholly based upon facts. Rags, unwashed and from an infected port, may certainly be potent carriers; and as the history of the *J. H. Glidden* teaches, a prolific source of infection, as also hides and animal remains. On the *Chr. Martell* seven out of twelve employés sickened, who had carried the partially decayed sheep-skins on deck. But few cases are known where general cargoes and the products of the tropics proved injurious, unless in a state of decomposition.

Dunnage and Personal Effects.—That dunnage from the hold of an infected vessel may carry the virus we have the evidence in the *Susquehanna*. A Watchman (?) slept in the folds of a sail removed from the hold of the ship the previous day; he sickened in five days, and died of yellow-fever.

That the virus may be carried a great distance by *personal effects* we have in evidence the well-known instance of the chest of clothing carried from Martinique to New Haven, in 1794; the clothing of a dead sailor, washed in Lombardy st., in 1822, and infecting all present; the disease of the Sinclair family in Quarantine, in 1848, attributed to the clothing of stevedores sick with yellow-fever; and, more recently, the case of the mate of the *Crawford*, who went from a vessel, which subsequently proved infected, on board of another, outward-bound, the captain of which sickened three days after he slept in the bunk above the one containing the mate's clothing—in every instance the effects came from localities positively infected, without being opened and ventilated, and carried to localities favoring infection.

After careful consideration of the nature of yellow-fever, conclusively proving its exotic origin, and that it cannot occur in our latitude unless carried by vessels and fomites, the conditions of infection of vessels abroad and the means of conveyance to our shores—the quarantine measures to prohibit the introduction and prevalence of the disease is the question of the greatest importance.

The Quarantine of Yellow-Fever.—By law all vessels from any point south of Georgia, the coast of Africa, and the Mediterranean are boarded from the hospital-ship, anchored about three miles below the Narrows. Upon examination of the bills of health, the sanitary record, and the present condition of passengers and crew, *immediate pratique is granted*, or the *vessels are detained* to remain under *observation*, or *perform quarantine*. Immediate pratique is only granted if no pretext whatever exists to retain the vessels. I use the word pretext purposely; for as long as the Health Officer is the beneficiary of his own acts, and every vessel quarantined is a source of revenue, as during the past few years, it is scarcely to be presumed that he will lean towards the master of the vessel, anxious to end his cruise and join his home, who finds even a few days' quarantine very irksome.

The *quarantine of observation* applies to all vessels coming from any port suspected of being infected, or at any time the seat of an epidemic, and implies a quarantine of from two to five days, opening of hatches, ventilation, and fumigation—provided the placing of half a dozen plates of black oxide of manganese, chloride of sodium, and dilute sulphuric acid merits the name of fumigation.

If the sanitary condition of the port of clearance is more questionable, or the cargoes of such a character that it belongs to the first class, as designated by law, the quarantine is extended from ten to fifteen days; and should the suspicion amount to positive evidence that sporadic cases occurred in the port of clearance, or any port where the vessel stopped on her homeward passage, the vessel is detained either with her own crew or with a crew of ship-keepers, for a period of from twenty to thirty days; and only if all remain well, and later reports from the port of clearance show that yellow-fever is not epidemic, the vessel receives *stream permit*, or direction to discharge on an *isolated dock* or *warehouse*.

It will be remembered that by the laws of 1805 vessels suspected of being infected were prohibited from coming nearer the wharf of the city than 300 yards; and the "stream permit" is unquestionably yet in obedience to this ancient law, and certainly one of the best provisions whenever a question as to the sanitary condition of the vessel exists. "Isolated stores and warehouses" is of course a relative term; the stores especially mentioned are, however, the west side of the Atlantic Stores, Brooklyn, which, surrounded by water and built of stone, and at least half a mile from any dwelling, offers facilities of isolation and comparative security which no other presents. Should Robin's Reef be built up by stone, as granted by the Legislature, it would of course supersede the Atlantic Dock for all quarantine restrictions.

A vessel arriving from a port declared to be infected, by foul bills of health or private information, is suspected of being infected, though all are well and have been during the passage. After a few days' quarantine she is discharged by licensed stevedores and lighters, and no pratique granted until sufficient time has elapsed to prove, by the continued good health of the employés, that she is not an infected vessel.

By the discharge of vessels we have not only thorough ventilation, efficient means of disinfection of vessels and cargo, but, in the continued good health of a number of unacclimated employés, exposed to the virus under the most unfavorable circumstances, a number of negative evidences amounting to positive assurance that the vessel is not an infected vessel.

From the same port vessels may arrive, on board of which cases of yellow-fever may have occurred while in port or on the passage, but no cases after the fifth day of her departure; she may be an infected vessel, but no positive evidence is adduced, since all her cases may be traced to the port of clearance; she is treated in the same way, receiving pratique only after every evidence manifests her sanitary condition.

Another vessel arrives with new cases of yellow-fever occurring six and more days after leaving port, or even after her arrival in New York Bay; she is quarantined in the Lower Bay for thirty days after the occurrence of the last case, then discharged by lighters, her cargo only receiving conditional pratique, and the vessel only after every evidence that she is no longer an infected vessel. When, however, this evidence confirms that she is and remains an infected vessel, she is quarantined *till frost*, her only salvation.

A difficulty arises in the treatment of vessels in ballast; in this case ship-keepers are placed on board, the vessel is cleansed, and the ballast moved by persons unacclimated to the disease, and the vessel treated as others.

Thanks to a manifest Providence, by this course not a single case of yellow-fever occurred in New York or harbor while Dr. Gunn was Health Officer, although over 500 vessels arrived from infected ports, and 10 vessels were declared positively infected, being refused pratique until after the middle of October.

It will thus be seen that the percentage of infected vessels in vessels coming from infected ports is only a *little over two per cent.*, or rather that the ordinary method of disinfection by ventilation and fumigation suffices to eradicate the virus of the disease, or, by extreme attenuation, renders it harmless.

It may appear strange that no provision should exist in our port for these positively infected vessels; but as frost alone exterminates the virus, and any other method would necessarily entail loss of life, quarantine till frost is after all the only safe method, and more readily submitted to by masters and owners than exactions which they deem frivolous and unnecessary.

Disinfection of vessels.—Frost alone can positively eradicate the disease, and to apply this so as to bring the temperature on board the vessels below the freezing point during the summer months is difficult, but by no means impossible, and only a few abortive trials have been made during the administration of Dr. Gunn.

Ventilation of vessel and cargo may, and, as our experience proves, will, in a measure, disinfect vessels, for we know that by discharging of cargo or ballast the virus is liberated, and vessels showing the most positive proofs of being infected on arrival, in the course of time give sufficient negative evidence to doubt longer that she is an infected vessel; but neither white-washing three times, as under former laws, nor fumigation, nor ventilation, nor even scuttling, will positively disinfect an infected vessel.

Fumigation.—The very method of fumigation as now employed in quarantine shows the utter contempt for this method of disinfection, and I doubt very much if a medical man can be found who believes that chlorine, to the amount used on board of these vessels, can have any effect whatsoever in the disintegration of the virus; and neither bromine nor carbolic acid, nor any other of

our disinfectants, can really prove more than mere auxiliaries in the disinfection of vessels.

The Upper and Lower Bay as Quarantine Stations.—The detention of vessels at the Lower Quarantine, both while under observation and quarantined as suspected or infected vessels, commends itself so positively to our view of quarantine that it needs no argument in its favor, and the discharge of suspected vessels at the Upper Quarantine is excusable only by want of facilities at the Lower Bay, and at no time should more than two or three vessels be discharged at once, and at a sufficient distance from either shore, to insure immunity. Should stevedores or other employés sicken during the process, the vessel is to be returned to the Lower Bay and treated as an infected vessel.

Ship-keepers.—The employment of ship-keepers to act as tests for the sanitary condition of the vessel may appear questionable; but as they fully understand their position, and are correspondingly paid, they voluntarily assume the responsibility.

Stevedoring.—The stevedores are the most important instruments in the hand of the Health Officer—his barometers, by which he judges the sanitary condition of the vessels; yet as only suspected vessels are to be discharged, or in equity can be discharged, the stevedores enjoy a certain security, although, of course, they are exposed to constant danger. Under the *régime* of Dr. Gunn they were mostly residents of Staten Island. Roll was called every morning, and any absentee immediately visited, and, if sick, taken to the hospital. The vessel where he contracted the disease being, of course, the one where he labored five days—the universally accepted time of incubation in yellow-fever—previous to his illness, and such vessel then considered an infected vessel. At present a barge anchored in the Bay answers for their residence, and, of course, places them still more under the vigilant eye of the Health Officer.

Lightering.—Under the present law, vessels in quarantine are lightered by persons and vessels licensed for that purpose by the Health Officer, and though their compensation is fixed by the Quarantine Commissioners, the exactions under this monopoly are such that the lightering of cargo in quarantine is considered one of the most oppressive burdens of commerce. And when we consider that the vessels so licensed are daily at the wharves of the city, and used at the option of the owner for every other purpose, we must certainly question the equity of law which grants such monopolies. It is true that men on board are subject to infection by yellow-fever, but this can only happen if the sanitary condition of a vessel has been improperly judged; and if it should happen, no one believes at the present day that a man sick with the yellow-fever could communicate the disease to others in his residence. The only thing necessary, then, and justifiable by reason or experience, is that the men employed in quarantine shall give bonds to the effect that any sickness occurring among their employés shall immediately be reported to the Health Officer.

IN VARIOLA.

An efficient quarantine is established by preventing the intercourse of the community with variola, and the personal eliminations of the disease. Variola did not exist on this continent before the advent of the Caucasian race, and cannot originate *de novo* among the nations which have supplanted the Aborigines. It may, therefore, become absolutely extinct if we succeed in cutting off all intercourse with the persons diseased and their eliminations. *The persons* are either the patients already manifesting the presence of the disease in the particular eruption, or persons exposed to the virus, in which the disease has not yet made its appearance. The eliminations of the disease are its products—the scab in its progress to maturity, and the more ethereal eliminations impregnating the clothing and other personal effects of the diseased within a certain distance. What this distance may be, and the medium of its propagation, I am as unable to determine as I am to explain how far the odor of the patient may be carried, and by what means.

We find, perhaps, in this a vague but approximate analogy. Certain it is that in no instance has the disease been known to have been communicated from the Small-pox Hospital at Quarantine to the surrounding village, a distance of some 300 feet. An interesting and rather amusing incident was related to me by the captain of a Coolie vessel, on which small-pox appeared soon after leaving port. He had a coop erected in the mizzen-top, where he placed his two patients; not only did no new cases occur among the passengers, but the convalescents descended hale and hearty after spending three weeks there. Another captain quarantined a case of small-pox occurring among his crew, by placing him in a boat hung by a davit from the stern of his vessel; the man recovered, and no new cases occurred.

Small-pox patients are now carried to the hospitals on Ward's and Blackwell's Islands, and the only question is the propriety of the mode of transportation in boats used for other purposes? In the determination of the quarantine of well passengers, exposed to the virus of small-pox, the extent and source of the disease, as well as the mode of isolation of the sick, must necessarily guide the Health-officer in granting pratique. If occurring as an isolated case, only traceable to the port of clearance, vaccination of the passengers and immediate pratique is all that is desirable. When, however, a number of cases have occurred, the port of clearance not being the source of infection, but the sick on board of the vessel itself, thorough vaccination, and revaccination of all that have not taken the vaccination after four days' quarantine, are indispensable; and as vaccination only requires three days to manifest in its success entire and absolute immunity from the disease, pratique may then be granted, with the assurance that no new cases of variola will develop themselves. If not thoroughly vaccinated, new cases may occur, from seven to twenty-one days after the first case, or thirteen days after exposure and the maturity of the first case. For this reason I would commend the mode instituted by our lamented Dr. Gunn, who ordered the vaccination to be done with fresh lymph, by Dr. J. P. Loines, of the Eastern Dispensary,—almost invariably showing the desired result on the fourth day. The superiority of this plan over that of vaccinating from a scab, carried, perhaps for weeks, in the pocket of a police officer, appointed for the purpose of vaccinating, can scarcely be a matter of doubt in the profession. I would suggest, as a sanitary measure, that all vaccination be done by the vaccinating dispensary which may offer the greatest facility of obtaining, at all times, sufficient fresh lymph. In this way, not only would it be done thoroughly, but the Health Officer would be relieved of the suspicion of giving orders merely for his own pecuniary benefit.

The disinfection of clothing, bedding, or personal effects, impregnated by the eliminations of small-pox patients, may be effected by a continued high temperature, interment, or fumigation, or by over twenty-four hours' exposure and ventilation on a warm summer's day. Thirty minutes' exposure of the scab of the small-pox patient,—the most concentrated form of

personal eliminations—to a temperature of 130° and upwards, will destroy its virus as effectually as three days' burial in dry clay—a process efficient enough, not only to render the virus perfectly inert, but also to exterminate the pediculi so often infecting the clothing of small-pox patients. Simple washing and boiling will disinfect—but this measure may be carried *ad absurdum*, if not only the effects of the patient, and the materials within the reach of the eliminations of the sick, but all the effects of the passengers of a first-class steamer are also required to be so treated. The vessel itself requires no further quarantine than is required to wash and clean the rooms occupied by the sick, and by fumigation, entirely destroying the germ of future infection. A scab from a patient exposed to the fumes of nitrous acid will only become inert after continued exposure; while chlorine will only produce its effect in its concentrated form. Fumigation in small-pox is, therefore, to say the least, a questionable expedient, and certainly much less reliable than high temperature.

Having thus briefly spoken of the quarantine of small-pox, and recommended the immediate removal of the patient, vaccination of the well passengers, washing or burying their personal effects, and the cleansing of the vessel, let us proceed to the quarantine of typhus.

TYPHUS.

The records of the quarantine hospital show that cases of typhus were admitted during almost every year, from its opening, in 1798, to the present day, almost invariably occurring after long passages on board of crowded vessels, with insufficient and unwholesome food. But it was not until after the Famine in Ireland, in 1847, that the disease really became epidemic. From that year until 1853 over twenty thousand cases were admitted and treated in the Marine Hospital, crowding the buildings to overflowing, and necessitating the temporary occupation of the public stores for hospital purposes. These were four stories high, large and massively built, with ceilings not more than nine feet high. The mortality in these was, however, so fearful that they had to be abandoned, and temporary shanties erected, thereby diminishing the percentage of deaths to nearly one-half. Since 1853 the number of cases has been steadily decreasing, until in the last few years comparatively few well-authenticated cases have occurred either on ship-board or in the Emigrant Hospital. With increased facilities of intercourse and commerce, of railroads and steamboats, famine has become well-nigh an impossibility, and typhus, the legitimate offspring of inadequate nourishment and bad ventilation, has ceased its ravages in Ireland, its principal habitat. With the advent of ocean steamers and quick passages, it is scarcely possible that we shall even have any considerable number of typhus patients to provide for, or that there will be occasion for quarantine regulations to prevent its introduction. Typhus can originate as an epidemic only from grand national disasters, and, as already mentioned, it follows in the wake of famine and destitution, and is communicable, contagious, and infectious only by personal eliminations of the sick poisoning the immediate atmosphere, and rendering all within its precinct amenable to infection. The more concentrated the poison, by reason of the great number of the sick, and the less the number of cubic feet of air allowed to each sick individual, the more intense the poison, and the greater the danger—hence the terrible mortality in the public stores already mentioned, where not merely fifty per cent. of its inmates, but also of the nurses and attendants who entered them, were among the victims. To the same cause may also be attributed the virulence of the disease on board of emigrant vessels crowded with passengers, imperfectly fed, and with less than the requisite amount of air to sustain a healthy condition. Dr. Doane, the lamented Health Officer, died after a single visit to the steerage of one of these vessels. As heated air ascends, so will the air impregnated with the virus of typhus ascend—in proof of which I may give my experience in one of the typhus wards, in which almost every patient in certain beds of the ward died, while others recovered. Upon examination it was found that a shaft communicating with the ward below opened directly under these beds. For the same reason we find that on board of emigrant vessels the disease is much more prevalent in the neighborhood of air-passages, communicating with the lower deck containing cases of this disease, than elsewhere. And while the morbific cause of the disease is so potent in the wards, it is a singular fact that a few feet beyond it, and by the interposition of a comparative narrow stratum of pure air, all danger ceases. There is not a single instance on record in which the disease was communicated to a distance greater than one hundred feet from the typhus ward, where every attendant sickened and many died.

The quarantine of typhus, therefore, is simply isolation of the infected; and the present provision at Ward's Island is probably as good as can be provided, as no possible danger could accrue to the city in their transportation, or to the other sick of the hospital, if any number of typhus patients should be provided for in isolated buildings on the island. Not only those sick of typhus, but all who have been exposed to, and therefore subject to the disease within the ordinarily accepted period of incubation, should immediately be removed; and I know of no place better adapted for the reception of such passengers than the extensive fields of Ward's Island, where, during the winter season, they can be placed in well ventilated houses; but in summer, if possible, they should live in tents. An instance of a quarantine of this kind we had a few years since in Perth Amboy, where the passengers of a badly infected vessel were disembarked, quarantined in open tents, and not a single case occurred after their disembarkation. Indeed, I hold the practice of retaining the passengers on board of vessels on which typhus had prevailed as most reprehensible; for although the sick may be removed, and every precaution taken to prevent the further progress of the disease, it cannot thus be arrested. In the instance of the *Cynosure* we have the most painful illustration of this. Not only did further cases occur after debarkation at Quarantine, but valuable lives were lost, and the entire dépôt at Castle Garden was endangered by this nefarious practice. The quarantine of *vessels* after the debarkation of the sick and well is only requisite for the time necessary to thoroughly cleanse and fumigate them; and here the fumigation by chlorine gas, generated from a mixture of the black oxide of manganese, salt, sulphuric acid, and water, is certainly the most efficacious. *Merchandise* from vessels with typhus on board can *never* be the subject of quarantine; for there is no instance on record in which it was, or could possibly have been, the morbific agent of the disease.

CHOLERA.

The literature of cholera is so voluminous, and the history of its Indian origin and prevalence, its migration over the Continent of Europe before it reached America in 1832, is so familiar to all that I cannot pre-

sume to refer to it except in its relation to the subject before us—the quarantine of cholera.

The verdict of the ablest writer is, "that all quarantine and sanitary cordons are useless." I admit at once the truth and equity of the verdict, unless all intercourse with the locality where the disease prevails as an epidemic, even in a limited form, is absolutely and entirely cut off; for the researches of Pettenkofer, corroborated by our own experience, prove beyond a question, that though persons from an infected locality are invariably the pioneers of the disease, wherever it occurs, they may be apparently in good health when they leave the source of infection, and unconsciously to themselves, or inappreciably to others, be the carriers of the disease. But while admitting this as truth in Europe, and on this continent if the disease has once taken a foothold, I make the assertion with as much assurance, that with a sanitary cordon of 2,000 miles in width, and a lapse necessary for its transit of ten days or even more, *an efficient quarantine* may prohibit and absolutely prevent the introduction of the disease into America.

Before 1832 the records of quarantine exhibit, almost annually, deaths from "cholera morbus;" but not until the 10th of July of the year named have we any records of Asiatic cholera at the quarantine hospital. The disease had then already become epidemic in Quebec and Montreal. Whether it had been conveyed to this port by the *Henry IV.* from Havre, or whether it had been brought hither by the ship *Carrick* from Europe, arriving on the 1st of June, only a few weeks prior to the *Henry IV.*, I will not undertake absolutely to decide. It is rather ominous that the first two cases were admitted from New York, and not from ship-board.

A brig bound from New York to New Orleans was wrecked on Folly Island, and the passengers and crew, among whom cholera had prevailed previous to the disaster, were taken ashore. The disease extended to the few negroes and wreckers living there; physicians and nurses were sent from Charleston to attend the sick.

In January, 1833, a man-of-war arrived at Havana with cholera on board. In February it became epidemic in the town, carrying off over 10,000 persons, or 10 per cent. of all its inhabitants.

In 1848 cholera prevailed in Bremen. Unable to procure the desired accommodation, a number of emigrants went to Havre, and thence took passage on the *New York* sailing on the 9th of November. On the 16th cholera first appeared among the passengers from Bremen. On her arrival here in New York, on December 6th, seven had died and eleven were landed sick. The remainder were landed at the public stores. Many were subsequently taken sick, and the disease extended to the hospitals and the surrounding buildings—the first case occurring on the 6th of December in the building nearest to the ward where the female cholera patients from the *New York* had been placed; and on the 8th of December another, in the ward contiguous to the cholera hospital for males; on the 10th of December several cases occurred in the building where patients from the same ship with other diseases had been placed. In all, over 100 were attacked.

In the spring of 1849 a number of vessels arrived with cholera on board, the disease again extending to other patients, over 100 dying. But it was not until May that it made its appearance in New York.

In Boston the Argyle arrived from Scotland, with cholera on board, on the 4th of June. 600 deaths occurred from the 11th of June to the 13th October. In New Orleans the first case of cholera came from the ship *Swinton*, arriving on the 2d of December from Havre; and from the 11th of December until the 7th of February over 1,200 died.

The fatal consequences that have almost invariably followed the new introduction of cholera during the subsequent years, have not been so appalling as the above mentioned. But the books of the Marine Hospital prove that, in almost every instance when cholera was brought here from ship-board, the disease spread among the sick inmates nearest to the wards containing the patients, and more than once decimated the hospital in its fearful progress.

In 1858 the quarantine hospitals on Staten Island were destroyed by a mob, and the port of New York remained exempt from a visitation of cholera until 1866, when the *Atalanta* arrived from Havre, reporting 60 cases and 15 deaths from cholera during the passage, and having 21 sick with cholera on board. These, and 23 other cases which occurred while the vessel and passengers were at quarantine, were sent to the Floating Hospital. Thirty days subsequent to her arrival, and ten days after the occurrence of the last case, the vessel received pratique, and no further cases were reported either among the passengers discharged or the employés of the hospital. About the same time cases of cholera occurred on vessels arriving from the same ports; but the disease again disappeared before they reached New York. It is, however, remarkable that the disease, on these vessels at least, could be traced to the same hotel in Havre; all parties corroborating the statement that several persons died of cholera while the passengers who became the first victims on the different vessels boarded there.

If, then, as clearly proved by the facts before us, cholera never appeared here except when brought from abroad; and persons were invariably the carriers of the disease, both to the vessel and from the vessel to the shore, *the quarantine of cholera is a quarantine of persons*, and the virus, reproducing the disease, is the *personal elimination* of the cholera patient, but differing from the virus of small-pox and typhus—both eruptive diseases—in not being the eliminations of the skin but of the alimentary canal.

The "Floating Hospital" used on the emergency of the arrival of the *Atalanta's* passengers was, for the purpose, certainly preferable to the hospital on Staten Island; for not only was their isolation more perfect, and the danger of communication to convalescents or sick of other diseases, especially typhoid, avoided, but the dejections of the cholera patients, incontrovertibly the principal receptacle of the morbific agent, and the generative principle of the disease, were cast into the sea, and with them all danger of infection and communication was avoided. The buildings on West Bank, lately erected, may offer greater facilities and comforts, but scarcely as much security. The well passengers of cholera-infected vessels may be divided into two classes: the first, where the disease already exists, but the patient suffers merely from a colliquative diarrhœa, scarcely more than a matter of inconvenience to him, but equally morbific in its agency as the dejections of a cholera patient in a state of collapse; the second class, merely the subject of the incubation of the disease, but in whom no development has as yet taken place, comprising, of course, all the passengers exposed to the morbific agency of the disease. For this class, the buildings on West Bank are most admirably adapted. The time of quarantine may be fixed at 10 days after the occurrence of the last case, being three days longer than the accepted period of incubation. Though this may seem long, we must not forget that a single case may be the cause of an epidemic, as clearly proved by Pettenkofer, in the history of cholera at Altrau, in 1865, when the disease was introduced by a lady direct and only five days from Odessa; in Thoyden Bois, in

England, by a gentleman from London, and in our hospitals, by the arrival of a single cholera patient from Aspinwall.

The quarantine of merchandise may be safely reduced to the quarantine of merchandise soiled by the dejections of cholera patients, and to personal effects. Dr. Simpson relates a case of the transmission of the disease by a chest of clothing from a cholera patient, aided perhaps by the use of unwholesome food contained in the same chest. That the disease in the Marine Hospital almost invariably attacked others in the same building or in the adjacent ones, may be explained by the fact that the soiled linen of cholera patients was placed in a building attached to the water-closet, and allowed to remain there for days, these being only a few feet distant from the shanties used for the reception and treatment of the cholera patients.

The disinfection of the clothing and rags, the only merchandise which properly can be soiled by the dejections, can be effected by ventilation, fumigation, and submerging in a solution of the sulphate of zinc, or, better still, of carbolic acid. How long such effects may retain the cholera virus is rather a matter of opinion than of positive demonstration, and if effects infected with the cholera virus may be disinfected by exposure and ventilation, and if cholera effects disinfected in this way may eliminate the morbific virus, through our own medium, the air, the most pertinent question is the distance to which such morbific agent may be carried. In answer I may cite the theory of Mr. Simon, that the cholera germ diminishes in ratio to the square of the distance from the point of emission. Certainly no case has come under my observation, where the germ was carried more than 200 feet, and the hospital on West Bank offers, therefore, the desired security.

The quarantine of vessels, after the discharge of the passengers, and thorough fumigation and washing by a solution of carbolic acid, is scarcely necessary beyond the time required to do this; and the first instance has yet to be adduced where the infection could be traced to vessel or cargo.

In speaking of the quarantine regulations, I have treated the subject as my long experience and familiarity with the practical workings of quarantine demand; and in presuming to make suggestions before the Academy of Medicine, I invite their deliberations to questions which can only be decided by men of science, and thoroughly familiar with the mode of propagation of each disease. The community looks to the profession as its legitimate guardians, and the merchant for relief from exactions and impositions.

VACCINATION DURING THE FEVER STAGE OF VARIOLA.

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Previous to the great discovery of Sir Edward Jenner, towards the close of the eighteenth century, the rate of mortality from small-pox was enormous, and is estimated to have reached fifty per cent. Moreover, the symptoms and course of the disease were of a more aggravated character. No wonder then that efforts had been made from the earliest periods to mitigate the outbreaks of the epidemic by preventive measures, as well as by the administration of remedies.

When and where inoculation originated is not known. From time immemorial the Chinese have practised a method of "sowing or disseminating" the disease, which consists in introducing the scales of the eruption into the nostrils. At a very remote period, in Hindostan, a tribe of Brahmins resorted to it as a religious ceremony. A small incision was made, and cotton soaked in the virus applied to the wound. Offerings were devoted to the goddess of spots to invoke her aid; this divinity having first hinted at inoculation—"the thought being much above the reach of human wisdom and foresight." But the merit of introducing the practice into England, from Turkey, is due to Lady Mary Wortley Montague. Writing from Adrianople, in April, 1717, she observed: "Every year thousands undergo this operation; and the French Ambassador says pleasantly that they take the small-pox here by way of diversion, as they take the waters in other countries. There is no example of any one that has died in it; and you may believe I am very well satisfied of the safety of the experiment, since I intend to try it on my dear little son. I am patriot enough to take pains to bring this useful invention into fashion in England." (The Letters and Works of Lady Mary Wortley Montague, third edition, vol. i., p. 309. London, 1861.)

The debt which our ancestors owed to this lady is not diminished by the fact that inoculation had been practised for very many years in South Wales, where it was known as "buying the small-pox;" for this circumstance only became generally recognized as Lady Montague's views engaged attention, and while she enjoyed the privilege of being the best-abused person in England."

It has been calculated by the Registrar-General of England, that the average number of deaths annually occurring from small-pox in London, during the years 1660–79, were 357 to every 100,000 inhabitants, whereas in 1859 they were 42 only for the same proportion. Later statistics have reduced this proportion still further.

But even the most palpable evidences of the benefits of vaccination have never sufficed to quell the opposition to it. Statistics have been published, laws passed and enforced, and still the voice of opposition is as far from being stifled as it was nearly one hundred years ago. It is even at present so vehement that intelligent physicians have entered their protest against vaccination as utterly ineffective. The press has also to some extent endeavored to establish the futility of the enforcement of the measure. To defeat this broad assertion nothing is needed but a reference to the statistics of any country, since the introduction of vaccination.

Some of the objections urged seem at first glance to be quite reasonable; but on closer scrutiny it will be found that all are based upon false presumptions, and consequently worthless.

It has been argued: 1st. That the prevention was worse than the disease; the dissemination of the poison throughout the body was paramount to an introduction of the disease itself, the consequences whereof could not be calculated. While it is true that the poison is intended to be and is disseminated throughout the system, it must be remembered that the constitutional disturbance caused by the introduction of the virus is of the mildest character, and never productive of evil results. On the other hand, the benefits derived from it are immunity from the disease for a period of from seven to ten years, and certain immunity at the time of an epidemic, as my experiments, to be spoken of hereafter, will conclusively prove.

A second objection is the possibility of engrafting upon the constitution such diseases as syphilis, scrofula, etc., by means of virus taken from persons afflicted with these diseases. There can be no doubt that by the use of a foul lancet pyæmia has been caused, and abundant evidence exists of the fact of syphilis having been com-

municated by vaccination. The use of a dirty lancet can, of course, and ought to be avoided. As to the introduction of syphilis and other blood contaminations, Dr. Viennois, in an exhaustive paper upon the subject (*Archives Générales de Médecine*, vol. i., p. 641; vol. ii., pp. 32, 297; Paris, 1869), has come to the conclusion that if the lymph from a vaccine vesicle alone be introduced, the cow-pox alone will be introduced; but if in addition the blood of a person afflicted with syphilis be also inoculated, then syphilis will likewise be communicated. At the present period, lymph from the vesicle is almost universally employed, a fact to which I will refer again hereafter.

The third, and perhaps most plausible objection, is the uncertainty of a fixed period of immunity. The term of immunity is variously estimated at from seven to ten years, after which time the protection is supposed to have lost its power. Prof. Felix von Niemeyer, lately deceased, had instituted inquiry in that direction, and promised a treatise upon the subject at some future day. The work may have appeared lately, but has not come under my observation. Niemeyer feels justified in concluding in advance that vaccination is at all times necessary during an epidemic. Now in a city like New York, and all large places, small-pox never entirely disappears, and an epidemic is only spoken of when the cases are multiplied beyond the ordinary number. It is at such times that our health authorities, ever watchful of the welfare of their fellow-citizens, issue orders for the disinfection of affected neighborhoods, and urge the people to permit themselves to be vaccinated. Perhaps compulsion would be a better course. And then it is that the question arises, not only whether previous vaccinations will procure immunity, but whether the same now performed is to be considered a perfect safeguard during the present epidemic. There is often doubt in the minds of persons, coming in contact with the small-pox, who have subsequently been successfully vaccinated, whether they would not have escaped the disease without being vaccinated. This is in a great measure encouraged by the assertions of those who have been, or imagined themselves to have been, in contact with it, and providentially escaped infection either without previous or present vaccination. The escape is generally credited to an abundance of moral courage. This induced me to ascertain whether, after a positively decided contagion has taken place, and, the period of incubation being passed, the fever sets in, it would then be of any avail to vaccinate. And the results more than fulfilled my expectations. An epidemic of small-pox, which broke out in the city of St. Louis, and continued for three or four months, furnished the necessary material. While I was acting in the capacity of public vaccinator, a young man presented himself for admission into the hospital, suffering from all the preliminary symptoms of variola. He stated that he had been nursing his brother, then lying sick with small-pox, for the past twelve days, relying for protection against the disease upon vaccination performed in his childhood. For the past forty-eight hours he had high fever, with intense frontal headache, well-marked pain in the back, swollen tonsils, and, in short, every premonitory symptom of variola. I vaccinated him carefully, and sent him to the hospital to await the result.

On the following day (expectant treatment having been followed) the fever, headache, and pain in the back had abated. An elevation at the point of vaccination and a slight redness indicated the success of the inoculation. The patient felt perfectly comfortable. The vesicle gradually dried up and fell off about the eighteenth day. No further symptoms were experienced by the patient. In order to fully satisfy myself of the truth of my patient's statement, I called on his brother and found him in a convalescent stage of variola, the pustules having mostly broken and formed scabs.

The success of this case encouraged me to put my hypothesis to a still further test. During the course of the epidemic, eight other cases of the same nature presented themselves, the details of which are not necessary to describe. Suffice it to say that in each and every case the contagion was fully established. The result in each case was precisely the same as in the first case related above. In two cases the fever stage had lasted fully two days, as in the first case. In the others the fever had continued from twelve to thirty-six hours.

In one case only, the result was unfavorable. The fever in this instance had continued for nearly three days, when the inoculation was performed. A few hours later the eruption made its appearance all over the body, and the case proved a discrete one. I can scarcely assume that vaccination exercised any modifying influence, since no vesicle was reported to have made its appearance (the patient being under the care of another physician), yet the possibility of such an event cannot be denied.

As regards the modus operandi of the virus at this stage, I cannot look upon it as different from that of an ordinary vaccination. A good absorbing surface being produced, and the virus introduced in a state favorable to absorption, it is readily carried into the circulation. Capillary circulation being very active during the fever stage, as evidenced by the thermometer, seems to me to favor the absorption of the virus. This may in some measure account for the unusually rapid appearance of the vesicle. It is not my intention to speculate with regard to the action of the virus in the system. Whether it acts as a ferment, or, in some manner unknown, attracts the poison within the system to that particular spot, are mere matters of speculation. It is a well-known fact that counter-irritation, as for instance the application of croton oil to some particular part of the body, as the chest, has the effect of determining the eruption to that neighborhood.

If we choose to consider a local point of irritation a favorable spot for the eruption, the question will be solved as far as speculation can solve it. The fact that at that point the skin has been removed and the corium exposed, will render the spot a "locus minoris resistentiæ" for the eruption.

I think that the results of these experiments will justify me in calling the attention of the profession to them. My excuse for presenting so limited a number of cases, lies in my inability to put it to a further test, owing to want of material. Nevertheless, I do not hesitate to affirm that *vaccination, properly performed, previous to the exacerbation of the fever on the third day, will cut short the disease, by quickly relieving the general symptoms of small-pox, and causing a well-marked eruption on the spot inoculated.*

It must be borne in mind that the fever accompanying variola is of a remittent type, and, like all remittent fevers, has its highest range of temperature in the evening. The third, and usually the last exacerbation, is also the most severe (marking the highest temperature), and quickly followed or rather accompanied by the eruption. Vaccine virus introduced during this last remission will scarcely have time to be absorbed, though it is possible that when absorbed it may mitigate the character of the eruption. Of this, however, no positive proof exists, and it is merely mentioned as a possibility, if not a probability.

In inviting the attention of my colleagues to this important matter, I cannot refrain from requesting a

strict observation of the ordinary cautions in further testing the results of vaccination during the fever stage of variola. That the virus should be pure, unmixed with blood, and not too old, need scarcely be mentioned. For my part I have found the recently dried scab, exclusive of the inflammatory products on the periphery, rubbed up carefully with a drop of water or glycerine to a creamy consistence, to answer the purpose admirably. Various ages and various physicians have had their own peculiar method of introducing the virus, either by punctures of the skin or by scraping away the cuticle. Punctures of the skin, whether performed by the lancet, a pin, or some instrument invented for the purpose, are open to two objections. In the first place, the puncture will close immediately upon the withdrawal of the instrument. Even when the virus is introduced with the puncturing instrument, the application is too sudden to insure absorption. In the second place, it often occurs that, notwithstanding proper care is taken, blood will follow the puncture. Extravasated blood is very slowly reabsorbed, and therefore a hindrance to absorption of the virus when the latter becomes mixed with it.

In my opinion, scraping of the cuticle with a dull lancet until the corium is exposed, is, although a more laborious, a far more certain method. The first appearance of moisture on the scraped spot is an indication of having reached the proper absorbing surface. It is well not to be too sparing in the application of the virus, but to spread it upon the absorbing surfaces (for there should be two) as thickly as possible.

A CASE OF RECOVERY FROM DIPHTHERIA AFTER THE OPERATION OF TRACHEOTOMY.

Reported by GURDON BUCK, M.D.,

NEW YORK.

Visited Richard, son of James H., æt. 10, residing No. 8 Dover st., at four o'clock P.M., Nov. 28, 1871, by request of Dr. C., his attending physician, and found him suffering from very urgent and increasing dyspnœa; his voice was reduced to a whisper; cough was croupy; pulse frequent but regular; surface perspiring freely from the labor of respiration. He had been frequently vomited by medicine the preceding night, but without relief; croupy symptoms had existed for two or three days, and had become urgent within twenty-four hours. It was reported by his father that his physician had not found any exudation in the fauces. For some reason not explained, the attending physician did not appear at the hour appointed. After waiting a reasonable time I decided, in view of the extreme urgency of the symptoms, to proceed to operate. Fortunately the attendance of Dr. A. J. Harrison, who had visited the patient once, was secured without much delay. A narrow table, covered with suitable bedding, answered the purpose of an operating table. Four sperm candles cut into halves, and bound with tape into two bundles, served as lights that could be conveniently held at any point where they were required. No anæsthetic was administered. The boy's father held his head, and kept his neck on the stretch, while his godmother held the torchlights. The embarrassment of having only one medical assistant for the operation was felt at every step. The only feature of the operation to which the author would call attention is the expedient employed to facilitate the opening into the trachea itself. Two accidents are liable to occur in this step of the operation. One is, the incision may deviate from the median line; the other, failing to penetrate into the interior of the trachea, the knife may pass either between the outer surface of the trachea and its coverings, or between its inner surface and lining membrane. The procedure was as follows: An ordinary pocket-case tenaculum was thrust between the cricoid cartilage and first tracheal ring, exactly in the median line, and made to hook up the cricoid, thus serving to maintain a secure hold upon the trachea, and keep it at rest. While the tenaculum was held with the left hand, a sharp-pointed knife, held in the right, was made to penetrate the trachea immediately below the entrance of the tenaculum, and an incision was carried downward through the four upper tracheal rings. The knife, without being withdrawn, was immediately carried back to the point of entrance, and a transverse cut two lines in length was made on either side between the cricoid cartilage and first tracheal ring, giving the tracheal opening the shape of a letter T. A double trachea tube, previously armed with a piece from the blunt end of a gum-elastic catheter traversing it, and with its blunt point projecting a little beyond the inner end of the tube to serve as an obturator, was then inserted and secured with tapes passed around the neck. After the disturbance, always consequent upon the first introduction of a tube, had subsided, the respiration became tranquil and the patient soon fell into a placid sleep. Instructions were given for the removal and replacing of the inner tube as often as it required cleansing. About three hours after the operation the tube became obstructed by a coagulum, and the parents not succeeding in removing the inner tube, suffocation would have taken place had not Dr. Harrison fortunately reached him in time to dislodge the inner tube, which he did by prying it out with a knife-blade.

During the subsequent forty-eight hours the respiration continued easy, and his general condition satisfactory. At my visit in the afternoon of Nov. 30, however, I found his respiration hurried and labored, and it had been so for two hours. The tube had been kept clean and free of obstruction. The outer tube was now removed for the first time to cleanse it and change the fastenings. This permitted a view of the wound, the surface of which was found coated with a layer of grayish tenacious exudation, not, however, pellicular. From this appearance the diphtheritic nature of the disease was obvious, and it was inferred that a similar exudation was obstructing the air-passages and producing the dyspnœa from which the patient was suffering. After replacing the outer tube, and supporting the patient in a semi-sitting posture, a solution of common table salt, in the proportion of one teaspoonful to a teacupful of warm water, was poured into the trachea through the tube, one teaspoonful at a time, and at intervals which allowed the immediate disturbing effect of it to subside. A violent cough was immediately provoked by the entrance of the fluid, accompanied by the expulsion of a quantity of the viscid secretion in a diluted state. Five or six teaspoonfuls were thus introduced in succession, when he became somewhat exhausted by his efforts in coughing. While supported in a half-sitting posture his breathing soon became easy and unobstructed, and continued so without any subsequent recurrence of dyspnœa. He continued to cough more or less, but a good night's sleep followed. The next day he was found doing well; his pulse reduced to 100; his surface natural; his countenance animated, and his spirits cheerful. Inspected the fauces, and found no diphtheritic exudation in sight. He craved solid food and enjoyed it.

Ordered R. Sulph. quinine, sulph. ferri, āā ʒ ss.; acid sulph. aromatic. ʒ j.; syrup zingib. ℥ vij.; aquæ cinnam. ℥ ij. Dose, ʒ j. ter in die.

Dec. 2. Doing well. Removed and replaced the tube, and found the surface of the wound clean and healthy; appetite good.

Dec. 3. An urgent message summoned me to visit him at half-past five o'clock P.M. A hemorrhage from the wound, represented as very considerable, had taken place and alarmed the parents. His pale countenance and feeble pulse (80 per minute) showed the effect of the loss of blood. A thorough examination of the wound, the surface of which was pale, could detect no vessel. The occurrence of the hemorrhage was the more remarkable as, at the operation, the bleeding had not been considerable, and no vessels had required to be ligated.

Dec. 4. No recurrence of hemorrhage; doing well; respiration natural and easy; appetite good.

Dec. 7. Progress favorable. With the tube left out and the external wound closed by the fingers, patient could articulate some words in a natural tone of voice. I therefore substituted a fenestrated single tube for the double one, and closed the outer end with a cork, thus allowing him to use his voice and to breathe through the larynx, which he did without effort.

Dec. 9. Patient passed the day without a tube. The lateral edges of the wound have come into contact with each other, so that the air no longer escapes through the wound; respiration is now performed per vias naturales. His voice has still further improved. His cough continuing troublesome at night, the following mixture is prescribed:—

℞. Ext. senekæ fluid. } āā ʒ ij.
Tinct opii camph. }
Spirit nitri dulc., ʒ ss.
Syrup balsam tolut., ʒ ij.
M. Dose, ʒ j. pro re nata.

The following preparation in the form of spray was freely used throughout the whole treatment alternately with lime water, and apparently with good effect:—

℞. Ammon. muriat. } āā ʒ ij.
Potas. chlorat. }
Tinct. senekæ, ʒ j.
Aquæ rosæ, ʒ iv.
M.

Jan. 11, 1872. Patient was visited, and found in all respects well. His voice had regained its full force.

OVARIOTOMY.

TREATING THE PEDICLE WITHOUT CLAMP, LIGATURE, OR CAUTERY.

Being a Paper read at the Meeting of the Medical Society of the State of New York, held Feb. 7, 1872.

By JULIUS F. MINER, M.D.,

BUFFALO, N. Y.

Gentlemen—During the past few years I have been led to make some observations as to the anatomical characters of ovarian disease, and to base upon those observations, and a few clinical facts which have come to my notice, the conviction that ovarian tumors—cystic disease of the ovary—can be removed by *enucleation*, without ligature, clamp, or cautery. All other steps in ovariotomy have been pretty well settled; this one alone, of how to treat the pedicle remaining subject to the caprice of the operator, directed by no well-defined rule or law. Without attempting to enumerate the objections which may be fairly urged against all previous plans of procedure, allow me to describe a *new method*, which, I am now led to believe, will in all, or nearly all, cases be found feasible, and if so, is in every respect satisfactory.

My first observation and experience in this procedure occurred in April, 1869, and the case was reported in detail in the *Buffalo Medical and Surgical Journal* for June of the same year. It was described as follows:—"A few months since I was invited to remove an immense ovarian tumor, occurring in the person of Mrs. Foster, of Cattaraugus County, N. Y. It was of a year's standing, had been repeatedly tapped, but at length the contents proved to be too thick to be drawn through the largest-size canula; and the distress becoming too great for endurance, any operation which would end it, whatever might be the result, was gladly accepted. The tumor was multilocular, very large, weighing, as near as could be determined, nearly one hundred pounds. It was attached throughout its entire circumference to the omentum, intestines, walls of the abdomen, and all other parts with which it came in contact. These attachments were not so firm but that they could be broken up, and with great care the tumor was separated from the surrounding parts until the pedicle was reached. The process of enucleation had been carried on so successfully and so extensively that encouragement was afforded for continued trial: the pedicle was large, and extended over a wide surface, but by careful and patient effort it was separated from its entire attachment to the tumor, and the immense growth removed without the ligation of a single vessel. The terminal branches of the vessels of the pedicle gave out no more blood than issued from the vessels of the attachment elsewhere, and there appeared no more occasion for ligature here than elsewhere. All hemorrhage soon ceased, and the incision was closed by interrupted suture."

The success of this procedure was complete, and the patient continued for more than two weeks to improve without an untoward symptom—so long that her recovery seemed certain. She now commenced to lose her relish for food, grew weak and desponding, and died from exhaustion on the twenty-first day after the operation. The fatal termination detracted nothing from the success of this mode of treating the pedicle; indeed, so remarkable was the size and attachment of the tumor, that any attempt at recovery is surprising, and yet the feeble, emaciated, exhausted patient continued to live long enough to show that the manner of treating the pedicle was, at least in her case, unobjectionable.

My second opportunity to test the feasibility and safety of the plan I had suggested presented itself in the Buffalo General Hospital, in December of the same year, in a German woman sixty-six years old, of feeble and delicate appearance, and considerable emaciation. The operation was made in presence of the students of the Buffalo Medical College, and I was assisted by my colleagues both of the College faculty and hospital staff.

This tumor was found also extensively attached to the walls of the abdomen, and the process of separation was conducted as before, the bands of attachment being separated from the fibrous cyst of the tumor, not torn or broken. On reaching the pedicle it was found large, its principal arteries throbbing distinctly. It was separated readily by enucleation, commencing at its central attachment, and following out the fasciculi of vessels to their final termination upon the walls of the tumor. Upon removal, it was found to weigh seventy-one pounds, and to be composed of numerous cysts. The bands of vessels composing the pedicle, when separated from the tumor, contracted so as to leave the pedicle appearing almost as if it had been divided with the knife. To the surprise of my asso-

ciates, scarcely any hemorrhage followed the separation, much less than attended the separation of the bands of attachment elsewhere. This patient was narcotized by subcutaneous injection of morphine given by my Hospital Assistant. She died eighteen hours after the operation. *Post-mortem* examination showed no hemorrhage or other explanation, and we inferred that death was from overdose of morphine.

My friend and colleague Prof. James P. White, of Buffalo, has since made successful trial of this plan of operation—that is, successful so far as removal by enucleation without hemorrhage is concerned. He informs me that there was less hemorrhage from the pedicle than from other places of attachment; and that, though he finally applied ligature, he did not do it from necessity, but rather from fear of its occurrence after reaction should take place. Other similar cases might be related, but I prefer to refer briefly to the experience of others, in confirmation of my own observations. Richard H. Meade, Esq., Consulting Surgeon to the Bradford Infirmary, England, thus speaks upon the subject:—

"The patient being under the influence of chloroform, I made an incision about four inches long in the lower part of the linea alba, carefully opened the peritonæum, and evacuated nearly two gallons of ascitic fluid. On enlarging the opening in the peritonæum to the same extent as the external wound, the ovarian tumor at once came into view. I now directed an assistant to compress the abdominal walls with his hands, one placed on each side, so as to compress the edges of the wound backwards, while I endeavored with my hands to draw the tumor partially through the opening. In doing this, the walls of several of the small cysts, of which the tumor was principally composed (being very thin), were ruptured by the pressure of my fingers, and a considerable quantity of thick, brown fluid, like dark-colored linseed tea, escaped. The edges of the wound were so well compressed that none of this ovarian fluid was allowed to enter the peritoneal cavity. The tumor was now found to be firmly adherent to the free extremity of the great omentum; these adhesions were carefully and slowly torn through, and the whole mass was then easily drawn through the wound. It was now found to contain a good deal of heavy, solid matter, and, on turning it over to examine its attachments, the pedicle, which was small and thin, to my dismay and annoyance at the time, gave way, and the tumor tore itself loose from its connections. Fearing hemorrhage, I kept hold of the remains of the pedicle, but very little bleeding followed, and I could find no vessel requiring ligature.

"It is difficult to account for the large quantity of ascitic fluid which was met with, unless there were some secondary deposits of cancerous matter on the peritonæum, but the history of the case would hardly lead to that supposition. The presence of a considerable amount of serous effusion in the peritoneal cavity has, however, one advantage in cases of ovariotomy—it seems to render the membrane less likely to take on acute inflammation, its delicate secreting surface having undergone some change, and after the removal of the ovarian disease it does not seem to be re-secreted.

"In some of the medical journals a case of ovariotomy has been reported (extracted from an American periodical), in which Dr. Julius F. Miner removed a very large ovarian tumor by enucleation, without either clamp, ligature, or cautery, and without hemorrhage. When I commenced the above operation I had no idea of imitating his proceeding, but when the tumor (to my horror at the time) enucleated itself, and there appeared to be no bleeding from the pedicle, I determined to follow his example, and leave the torn surface unsecured, thinking that the risk from hemorrhage was less than that from inflammation from the presence of a foreign body in the peritoneal cavity. My case turned out successfully, and I think I should venture to repeat the proceeding in some special cases—for instance, where the pedicle does not appear to be vascular—when the attempt might be made to tear the tumor gently from its connections (in the same way as adhesions are generally separated), but a firm hold should be kept of the pedicle, so that it might easily be secured in case of bleeding."—*British Medical Journal.—Braithwaite's Retrospect* for July, 1871.

Upon these facts I based the conclusion that the pedicle in ovariotomy can be safely separated from the cyst, and left without ligature, clamp, or cautery, thus avoiding many dangers attending it. At first this proposition will appear startling to surgeons who have tied large vessels in the operation, or have witnessed the fearful hemorrhage which sometimes takes place from slipping of clamp or ligature; these will regard it with incredulity, and, perhaps, without trial look upon it as wholly impracticable. I should myself, probably, be among this number, had I not had opportunity to *demonstrate* to my own mind, certainly, its entire feasibility.

The ovarian tumor is composed of a firm, dense fibrous cyst, containing fluid of varied color and composition. It may, and it may not, have a solid portion, but usually it does have more or less of a body, the remnant of an enlarged or degenerated gland. Upon the surface of this smooth, dense fibrous cyst are spread out the vascular and cellular tissues which compose the pedicle, but only the terminal branches of the vessels enter this cyst; the vessels may be quite large at their origin, but soon they are numerously divided, and enter the cyst, if at all, of capillary size. The attachment of the pedicle to the cyst is more easily broken than any one would mistrust who has not attempted its separation in the manner described, and I am confident that the same efforts which are made to break up the adhesions to the peritonæum, omentum, and other parts, if extended to the pedicle, will be equally successful. The finger should be gently introduced under the central portion of the pedicle, and followed out along the fasciculi of vessels as they extend over the sides of the cyst; nothing can be more easy of execution or more readily accomplished.

If this method can be adopted without hemorrhage or other difficulty, its advantages are apparent.

The pedicle can then be returned into the abdominal cavity without any of the objections which have been urged against this procedure. There is no ligature to be discharged by the ulcerative process, or to become encysted, or to induce inflammation. There are no purulent or inflammatory products to be in any way removed or provided for; the pedicle is wholly a living tissue, and has no irritative qualities which render its return to the abdominal cavity objectionable. This cannot be said of it when treated by any other known method.

My object will be fully answered, provided the feasibility of enucleation in ovariotomy is shown with sufficient clearness to obtain trial by surgeons. It is now believed that all or nearly all cases will admit of it, or of this general plan at least, perhaps varied to suit circumstances; and that, where practicable, it is the least objectionable of all known methods. Prof. E. M. Moore, my colleague, has suggested that if after separation, as described, there is any slight or troublesome hemorrhage, the different fasciculi, or the various parts which

have extended over the walls of the cyst, may be braided, causing in that manner arrest of hemorrhage upon the principle of acupressure. Again, provided this method in any case should fail, the plan of arresting hemorrhage by acupressure or torsion, or separate ligation of any vessel which might seem to require it, with thread, silver wire, or other material, may yet be tried, may indeed be adopted as aid to the operation by enucleation.

The advantages of this procedure are sufficiently obvious to all surgeons of experience in this operation; and the feasibility of the method being granted, little else need be said to insure its universal adoption.

Original Lectures.

SCLEROSIS UTERI:

ONE OF THE SEQUELÆ OF PUERPERAL METRITIS.

A CLINICAL LECTURE,

By Prof. ALEXANDER J. C. SKENE, M.D.,

AT THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.
(Reported by E. S. Bunker, M.D.)

Gentlemen: You will readily call to mind the patient who had endometritis, giving rise to menorrhagia, and I trust you also remember the clinical fact, then so strenuously insisted upon, namely, that menorrhagia, not accounted for by any other conditions, is a common and most valuable symptom of endometritis.

In direct and striking contrast with that case, I present you one to-day, not of such frequent occurrence as the former, but presenting, nevertheless, points of extreme interest in its pathology and clinical history.

This patient informs us that she is 35 years old, has been pregnant five times, and has given birth to four living children. While pregnant at the seventh month, with her fourth child, she received an injury which caused her to give birth to a dead fœtus a few days afterwards.

During her fifth pregnancy, four years ago, she received a shock from seeing a friend in a convulsion; labor came on immediately, and she was delivered of a seven months' child.

Soon after her confinement she complained of pain and tenderness in the region of the uterus, followed by fever and delirium. These symptoms extended over a period of three weeks, and there can be little doubt, from the history given, that she had acute puerperal metritis, which left her health permanently impaired. Since that time her menses have been irregular, scanty, and attended with pain. At times she has a menstrual *molimen*, but no catamenial flow. During the last year she has menstruated only twice, the last time three months ago. So much for the previous history of the case.

She now suffers from extreme debility and anæmia, as you can see by her general appearance, and complains of ill-defined aching pains throughout the pelvis, but more especially in the sacral region; and occasionally she has very slight leucorrhœa. Her digestive organs are also very much deranged, and her nervous system, from the joint action of disease and drugs, is a miserable wreck.

By physical exploration I find that the uterus is enlarged, being an inch larger than normal. The body and cervix are tender to the touch, and the sound, carried into the cavity, gives extreme pain. The cervix is indurated and smooth, and the os is smaller and more circular than is usually found in those who have borne children.

Exploring the cavity with the sound, I find that while the long diameter is considerably increased, the antero-posterior and lateral diameters are relatively, indeed absolutely, shortened. The uterine walls appear to lie in close contiguity, so that it is impossible to turn the sound far in any direction.

These signs obtained by the probe are of vast importance, for they indicate clearly that the enlargement of the uterus is due to an actual increase in the *walls* of the organ, and not a mere expansion of its cavity, as in the case of endometritis, which I showed you the other day. In other words, the growth is concentric, not eccentric.

The cervix, as seen through the speculum, is notably pale; the os is small, with its lips curved *inward*. This retraction, or drawing inwards of the os, is confirmatory of the opinion that the walls of the cervix are enlarged more than the mucous membrane of the cavity. When the mucous membrane of the cervix is swollen, and the walls remain normal, the lips are enlarged or pouting.

Briefly, then, the physical signs indicate that there exists a condition of unusual *hardness* and *enlargement* of the uterine walls, while the relative or even actual size of the cavity is lessened. The uterus is also anæmic, as you know from a glance at the cervix. And, before closing the history, let me attract your attention to the fact that our patient has amenorrhœa—a condition that is much more common among the young than with those who have borne children.

Now you cannot fail to have observed that this case presents many points of resemblance to that of endometritis, which occupied your attention at our last lecture. It is on account of these resemblances that I present you this case to-day. By placing them in juxtaposition, as it were, when the subject is still fresh in your memory, you will be better prepared to study the points of difference; for both the past history and the present condition show that the cases are essentially different.

This patient's trouble began with acute inflammation of the uterus; the other's did not. This one had amenorrhœa; the other had menorrhagia. In the case before us the uterine walls are enlarged and the cavity diminished, the reverse almost of what obtained in the the other. The uterus, in this case, is indurated and anæmic; in the other it was relaxed and highly congested. These are plain outline distinctions, easily recognized at the bedside, and characteristic of almost opposite pathological conditions.

Excluding, then, the only uterine disease that might lead us into error, and basing our opinion on the clinical history and physical signs, we are compelled to pronounce this a case of what is usually known and described as "*chronic metritis.*"

But I fear the term "*metritis*" will lead you astray. It certainly does not give you a true idea of the pathology of the disease—at least, if you recognize inflammation only by the presence of hyperæmia, the exudation of lymph, suppuration, etc. In this case we have no such evidence of the inflammatory process; the present condition is not that of an inflammatory disease. It bears no more resemblance to ordinary inflammation than the stricture of the male urethra does to an acute gonorrhœa. Nor is the condition that of induration the result of the inflammatory process. That usually results in the *contraction* as well as hardening of the tissue in which fibrin is effused. Now, in the case before us, you will observe two conditions not often associated except in malignant disease, namely, hardening with *increased size* of tissue. Clinically considered, this condition is not unfrequently observed associated with a history and symptoms such as we gather from this patient, and in the absence of any name to indicate

the condition, I venture to suggest that of *sclerosis*—a term already familiar to you as designating morbid conditions of other organs similarly affected.

I confess to you my dislike to introducing new terms into the literature of gynæcology, and certainly would not if I did not think the one usually employed, namely, "chronic metritis," gives no true idea of the nature of the lesion.

The term *sclerosis* simply means hardening, and when applied to the inter-cellular connective tissue, it includes also thickening or growth of this structure. It resembles the condition described by Virchow as "nutritive irritation of connective tissue." Your knowledge of anatomy will enable you to estimate the relations of this tissue to the varied structures of the body. In its normal state it is an exceedingly delicate structure, and is extensively diffused in all parts of the body. It is the bond of union to the framework of the body as the plaster is to the bricks; it is the delicate curtain upon which the minute capillaries are spread; and it follows, of course, that the increased growth of this connective tissue takes place at the expense of the fibro-muscular tissue of the uterus, a condition of local anæmia is produced by pressure on the capillary vessels, and I need scarcely add that function and force are correspondingly destroyed. This lesion has been specially studied of late as it occurs in nerve-centres. Hypertrophy of the "neuroglia," or connective tissue in *patches*, gives rise to a condition resembling *locomotor ataxia*.

Now the result of this same proliferation of the connective tissue cells, from some previous spur of excitement, is precisely what we find in this uterus. We have the "nutritive irritation" of Virchow, affecting the connective tissue cells at the expense of the other structures of the part, and not simple induration from previous inflammation. The organ is rendered abnormal in size, dense in structure, brittle in quality, and is anæmic or bloodless.

In the older pathology we have no word that represents this condition. We can scarcely believe that the process is merely one of exudation of lymph into the tissues of the uterus, for that is usually followed by more or less *contraction;* nor can we for a moment believe that there is excessive cell-growth from malignant tendency. Thanks to our German brethren, they have pointed out and accurately described the lesion, and applied to it the name of "*sclerosis*." And no other term, in my judgment, so perfectly represents a certain class of uterine diseases, a typical case of which is now before you.

I would not be understood, however, as denying that there is inflammatory exudation. On the contrary, there is every reason to suppose, from the natural history of the disease, that there is more or less effusion of inflammatory lymph into the tissues of the uterus. But the hypertrophy of the cellular tissue, and consequent *enlargement* of the organ, are so much more prominent characteristics of the disease, that I have selected the term *sclerosis*, rather than metritis, to describe it.

It would be interesting in this connection to study how the lesions of sclerosis uteri are developed in their natural order of sequence; but time will not permit at present. Let me refer you for information on this point to a most admirable article on "*Chronic Metritis in its Relations to Malignant Diseases of the Uterus*," by Dr. Noeggerath, of New York. You will find it in the *American Journal of Obstetrics* for November, 1869. I will read you a brief extract:—

"The disease in question is the combined result of sub-involution of the uterus, and a process of exudation which takes place in the tissues of the uterus immediately after delivery, in consequence of puerperal fever. This interruption of retrogressive metamorphosis takes place whenever the natural involution of the uterus is interfered with by some injurious influences, so that the absorption of the exuded mass deposited between the muscular elements cannot be properly accomplished. This results in the development and permanent deposit of cellular tissue within the walls of the uterus."

Just here there comes up a question to which I can give but a single remark at present: Does sclerosis uteri arise exclusively from puerperal metritis? Or may it be developed from other morbid influences? Dr. Noeggerath says he has never seen the disease occur as a sequel of any other affection. My own experience accords with his. We should naturally suppose, however, that long-continued hyperæmia and nervous irritation might favor the proliferation of the connective tissue cells in the uterine walls, as well as elsewhere; but we have no proof as yet that sclerosis uteri is developed in that way.

Finally, sclerosis uteri is a *permanent* lesion. There is no tendency to restoration of normal tissue; on the contrary, there is lowered vitality of the part, and consequent tendency to still further degeneration. The affection exemplifies the general pathological law, to which there is no exception, that whenever the tissues of an organ are changed from their normal type, that change is towards degeneration, decay, and death. Hence the practical fact that these cases of sclerosis are peculiarly prone to such diseases as epithelioma, *cauliflower excrescence* of the cervix, etc., etc.

Malignant disease of the uterus can often be traced back through a natural history such as I have pointed out in this case; and that the tendency to malignant action is hastened in such cases by the injudicious use of caustics, I have no doubt. It is important, therefore, that we shall early recognize the difficulty and avoid a course of treatment that must end, sooner or later, disastrously to the patient.

Trusting that you comprehend the pathology of sclerosis uteri and its relation to other morbid states, I will now briefly recapitulate some of the leading points in the diagnosis of this affection.

1. A clinical history indicating that the patient has previously had puerperal metritis, followed by an impaired state of health.

2. Constitutional symptoms such as occur in chronic forms of uterine disease.

3. Derangement of function: usually irregular, scanty, and painful menstruation. The pain continues, as a rule, through the whole period of menstruation, and may be likened to an exaggeration of the ill feelings of an ordinary menstruation. By these peculiarities it may be distinguished from the dysmenorrhœa caused by flexion of the uterus. In this latter affection the pain is that of intense uterine colic, and is usually limited to the beginning of menstruation, decreasing or disappearing when the flow begins.

4. Enlargement and induration of the uterine walls.

5. Increased length of the uterine cavity, without increase of the lateral and antero-posterior diameters.

6. Anæmia of the uterus, indicated by the amenorrhœa, and the pale appearance of the cervix.

7. Absence of cervical disease, such as occurs in hyperæmic and inflammatory affections.

8. The slight retraction of the lips of the os, and the small diameter of the cervical canal in proportion to the increased size of the cervix.

THE MEDICAL RECORD:

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GEORGE F. SHRADY A.M., M.D., Editor.

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THE RELATIVE INCREASE OF POPULATION.

Although the subject of the relative increase of population among the higher and lower orders of society is one of vast importance, yet it has been terribly neglected. While men are discussing the great question of the rise and fall of nations, they seem to ignore the one great fact, where the men of which nations are made are to come from.

Dr. Nathan Allen, of Lowell, is one of the few who have given the subject a scientific and patient attention. He has studied the subject as it ought to be studied, statistically; and he has discovered that the average number of children to American families in New England is but three, or three and a half, against an average of eight to families of a corresponding social scale a century ago. Population can hardly be kept up among the cultivated classes, unless an average of more than three children are born to a family. This, then, is the great problem of the future; it is a problem which no nation and which no government has yet solved. Historians have long debated the question, what was the reason for the decline of Greece and Rome. Prof. Seelye, the eloquent author of *Ecce Homo*, has answered this question: "Rome died for want of men." "The human harvest was bad."

Dr. Allen, in a very suggestive paper, based on Prof. Seelye's essay on "*Roman Imperialism*," has shown by quotations from standard authorities that, in all probability, Greece died for the same cause as Rome. The nation died because the individuals that composed it died, and there were none to fill their places. The most pertinent fact concerning these statistics is, that they are in the main true (for Dr. Allen's opponents have made no headway against him), and they are confirmed by common observation. Practitioners in New York and vicinity tell us that they find not more than an average of three children in a family. Among the higher classes, very few families have more than five children, very many have but one, and altogether too many have none.

We should be glad to hear from practitioners in the country their views on this matter. A nation can do without high culture; it can do without extensive territory; it can do for a time without religion; it can, like China, do without a pure morality, *but human beings it must have.* Questions of science, of education, of government, of religion, of morality, etc., are trifles compared with this one great question of population. Unless we are greatly in error, the population in distant country-places increases among the higher classes much more slowly than it did one hundred years ago. The time must come when the labors of Dr. Allen and the few interested in this matter will be appreciated, when their errors, if they have made any, will be corrected, and the whole subject will be scientifically investigated. The time must come when physicians will evince a disposition to employ a portion of their leisure in studying the great laws of population.

THE PROPOSED DRUG BILL.

The Drug Bill now before the Legislature has been modified in several important particulars which will, we doubt not, render it even more acceptable to the pharmacists of our city. Instead of the several grades already mentioned we have now but two, viz., graduates in pharmacy and licentiates of pharmacy. The former grade comprises all those who hold diplomas from recognized colleges of pharmacy, and the latter includes such as have not enjoyed the privileges of these educational institutions, but who have obtained a license from the present board, or who shall pass the examination before the proposed new board appointed by the members of the New York College of Pharmacy. The other grades are, so to speak, abolished, and in their stead simple assistants are named who are only responsible through their principals. It is also provided that these so-called apprentices shall have served with some practical pharmacist four years before they shall be eligible for examination as licentiates. The provision for an annual registration is also abolished, as it has been objected to by many of the leading apothecaries as an unnecessary measure and an irksome obligation. Senator Weismann, Chairman of the Committee of Health, is understood to favor these modifications, as being best calculated to simplify the operations of the proposed board, and do away with the objections urged against the passage of the bill. The pharmacists may rest assured that no effort will be wanting on his part to jealously guard their interest, despite the pressure brought to bear upon different members of the legislature by members of the present Commission. The saving for the coming year of seventeen thousand dollars to the city should of itself be a conclusive argument in favor of the repeal of the present law, irrespective of the principle of placing a

premium upon legitimate education, which is one of the main and truly commendable features of the proposed new law. We sympathize with the pharmacists in their struggle for their rights, and sincerely hope that they may triumph over all opposition.

THE QUESTION OF QUARANTINE.

The question of Quarantine has of late commanded more than ordinary attention. The medical profession have had the matter under serious discussion, and some valuable papers bearing upon the contagiousness of yellow-fever, cholera, typhus fever, and variola have been read before the New York Academy of Medicine, with the result of placing upon record many important and interesting facts. The paper by Dr. Theodore Walser, in the present number of the Record, is a contribution to the subject of more than ordinary value at this time, detailing, as it does, the experience of one who has so long and so conscientiously served the Quarantine Department. We take occasion to commend his suggestions to the serious attention of our legislators, who have it in their power to modify the laws governing that department.

A MODEL HOSPITAL REPORT.

The Report of the Imperial Rudolph Hospital, of Vienna, for the year 1870, which we have just received, is truly a model of its sort, and we take this occasion to commend it to the attention of the large number of gentlemen who appear to think that the possession of hospital appointments for life, to the exclusion of others, entails upon them no responsibility towards the less fortunate members of the profession. In this report the usual tables of statistics are supplemented by a careful working up of each class of disease treated in the institution during the year, and by reports of all cases which have any features of interest. Throughout the volume there is an entire lack of that self-glorification which characterizes some of the so-called "hospital reports" which have appeared in our own large cities, and which, instead of being what the term would indicate—a report of all the work done in the institutions during the time specified—are little more than a collection of monographs upon different subjects, by several gentlemen, some of whom may never have had any connection with the institutions whatever.

FORCED MEDICAL SERVICES.

The *Intendant* of Valparaiso, by a decree of date October 11th, requires all the doctors of the city to submit to a weekly "turn," when they are to hold themselves in readiness to serve the public, whenever called on, from 12 P.M. to 7 A.M., for an entire week, and this without any remuneration whatever, in case of the applicants being unable to pay them. They are also required to take turns in attendance at a public dispensary, also without remuneration. Two of the sixteen doctors of the city suspended all work for several days, but resumed practice again, with the understanding that the "turn" should not be enforced, and the authorities are endeavoring to get physicians from abroad to remove to Valparaiso, on a contract to give their professional services for a term of years, under such laws, decrees, and ordinances as regulate the exercise of the medical profession in that country, and are to receive free passage to Valparaiso, and two hundred dollars per month, for the first three months. Before being permitted to practice they will (the correspondent of the *Medical Times and Gazette* writes) be required to pass a medical examination in Spanish.

On its face this is a very unjust and arbitrary law, and it is not to be wondered at that the profession as a body rebel. But aside from this, there are some modifying circumstances to be taken into account, which do not ordinarily obtain in medical communities. In the first place, the practice of medicine seems to be monopolized by sixteen gentlemen, the provisions of the law regulating said practice being sufficiently stringent to prevent the ingress of any ambitious outsiders. The question is certainly a suggestive one, whether these gentlemen should not be willing, in lieu of such a monopoly, to give some of their services gratuitously to the State. The law supports their interests on the one hand, and it would appear to be nothing more than a just return for them, even at the risk of personal inconvenience, to conform with a law which has the ostensible object of protecting the commonwealth. Again, it would seem to be a reflection upon the profession of that place that any law should be deemed necessary to compel their members to attend the poor; but we are disposed to take a charitable view of the case by assuming that a law based on such grounds is really uncalled for. In spite of all this, it would seem that our brethren of Valparaiso are not so alive to their purely professional interest as their protest would lead us to expect, else the obnoxious decree would not compel them to assemble at least twice in each year for the purpose of discussing matters of medical interest to themselves and to the State.

THE HEALTH OFFICER OF OUR PORT.

The power of the Health Officer of this Port to quarantine vessels at his discretion has been very much abused, and besides opening wide the door for bribery in every conceivable shape, it has been conducive to much shameful oppression to our merchants. This, it seems, from facts brought to light by the recent investigations of the Quarantine Sub-Committee of the Legislature, is particularly the case with the present incumbent. The system of lighterage, as now enforced under his direct patronage, is an abomination, and calls loudly for a remedy. The practice of fumigation, as carried on by him, is also deserving of the serious attention of such as have it now in their power of remedying the impositions connected with it. At present vessels

are kept unnecessarily long in quarantine, and fumigation is practised when there is no other apparent reason for the same than the mere object of increasing the emoluments of the officer by exorbitant charges. When we add to this the fact as brought out in the investigations of the Sub-Committee of the Legislature, that vessels held in quarantine are not unfrequently released on the payment of a sum of money, every unprejudiced person has a right to suspect that there is very good reason for the almost universal outcry among the merchants, of corruption and fraud.

In view of these charges, the profession owe it to themselves to enter their solemn protest against the course of the Health Officer of this port, and deny to him the right to represent them as a faithful protector of the health of the people on the one hand, and the rights of the commercial community on the other. Although, in a political sense, appointed as a representative medical gentleman, he long ago forfeited his right to be so considered. His appointment to the responsible office was viewed by the respectable portion of the profession of this city as an insult to their dignity. The recent developments of corruption in his department have in no way tended to alter professional opinion concerning him; and we speak the sentiments of our medical brethren, when we say that his removal will be one of the first of the important steps taken towards remedying many of the existing abuses of the quarantine. The profession as a body have a right to a voice in this matter, and now seems to be the time when its wishes should be heeded by the Executive.

(*Since writing the above, and on the eve of going to press, we learn that* Dr. S. Oakley Vanderpoel, *of Albany, has been nominated by the Governor, and confirmed by the Senate, to take the place of* Dr. Carnochan. *The profession have reason to congratulate themselves on the change, and to express themselves as perfectly satisfied with the choice.* Dr. Vanderpoel *has held many offices of trust, and to this, the most important of all, he will bring a reputation for professional ability, and an unquestioned integrity of character.*)

VOL. VII. TO END WITH THE YEAR.

It has been deemed advisable by the Editor and Publishers of the Record to end the present volume with the year. In order to do this to the best of advantage to our readers, we have concluded to issue four double numbers during the year. We give the first of these with the present issue.

Reviews and Notices of Books.

A Clinical Manual of the Diseases of the Ear. By Lawrence Turnbull, M.D.

The general practitioner stands very much in need of all the information he can obtain upon diseases of the ear, provided it be real information, founded on the actual experience of some accurate observer. A book, professing to treat of diseases of the ear, should do so in detail, and should not be a mere compilation of what has been written upon the subject by other authors, and this is all that the work under consideration is, though it claims to be more. Dr. Turnbull is mistaken in thinking that the day has passed for medical men to affirm that they "know but little of the anatomy and physiology of the ear, and nothing about its diseases." Most of the general practitioners are lamentably ignorant of the subject; and if they do not all confess their ignorance, do what is worse by concealing it, and do their patients a great deal of harm. The "scientific reformation" mentioned by Dr. Turnbull has not, unfortunately, extended as far into the ranks of the general profession as he imagines. The author's manner of expressing himself is generally obscure, and sometimes almost incomprehensible; *e. g.*, in speaking of the mode of introduction of the Eustachian catheter, he mentions "two new forms with drawings from *nature*, the results of experiments on the cadaver and living subject." Now whether the "*forms*" refer to the catheter or to the shape of the mouth of the Eustachian tube it is difficult to say. There is but little original matter in the book, and this of but slight account. The author quotes constantly and profusely, but does not always give his authority, or where the original can be found. He introduces entire pages from the works of other authors, but does not give the title of the book or journal. The plates in the front of the book are lithographs from wax preparations, and cannot compare in truthfulness and value with Rüdinger's photographs from the cadaver. Wax preparations, no matter how carefully prepared, give a faulty conception of fine organs like the ear. The author has a way, in his anatomical descriptions, of introducing a sentence with a partial quotation, and finishing it with some remarks of his own, instead of giving the quotation in its entirety, which seems to us decidedly unjust to the writer quoted. He makes the connection too close between catarrhal otitis media and disease of the bony structure of the ear. He errs in stating that the most frequent cause of disease of the mastoid cells in childhood is cold, contracted after birth, and followed by discharge; for in almost all cases not dependent upon the eruptive fevers the cause should be sought in the strumous or syphilitic diathesis. In the chapter on otitis media and interna, Case I. is reported as "otitis interna of *author*, followed by *death*." Now this is certainly ambiguous, and likely to lead one to suspect a ghostly authorship for the book.

In the chapter on chronic aural catarrh there are eleven pages quoted entire from Gruber's book on Diseases of the Ear, which can scarcely be accounted for except as a means of filling up the chapter.

The author devotes quite a long chapter to affections of the ear dependent upon disorders of the brain and nervous system, but as he tells us nothing, and makes several misstatements, the value of the chapter is rather questionable. One good point about the book is the frequent mention and high praise accorded to Dr. Roosa, for all that he has done to advance the science of Otology. Dr. Turnbull has evidently read a great deal, and is tolerably well acquainted with the subject, but his work as a compilation is of much more value than as an original treatise.

Transactions of the American Ophthalmological Society.

This organization is composed of fifty-one active, and seven honorary members, representing the majority of the leading ophthalmologists of this country. The

eighth annual meeting was held at Newport, Rhode Island, July 20th and 21st, 1871. The subjoined interesting and scientific papers were presented: Report on the progress of Ophthalmology, by B. Joy Jeffries, M.D., Boston, occupying fifty-nine of the 149 pages; An Apparatus for Cutting Microscopic Sections of Eyes, by Edward Curtis, M.D., New York; General Syphilitic Inflammation of the Eye, by Francis Delafield, M.D., New York; Halo round the Macula Lutea, by Edward G. Loring, M.D., New York; A Scheme to Aid in Examining and Recording Cases of Functional Trouble of the Eye, by Henry D. Noyes, M.D., New York; On the Tables Given by Loring and Knapp to Show the Displacement of the Retina in Emmetropia, by O. F. Wadsworth, M.D., Boston; Variety of Forms of Small Pencils of Astigmatic Rays, by G. Hay, M.D., Boston; The Retina an Asymmetrical Surface, by Russell Murdoch, M.D., Baltimore, Md.; An Additional Method for the Determination of Astigmatism, by Geo. Strawbridge, M.D., Philadelphia; On Astigmatism as an Active Cause of Myopia, by John Green, M.D., St. Louis, Mo.; Remarks on Cataract, by Edward G. Loring M.D., New York; An Apparatus for Testing the Perception of Color, by Henry D. Noyes, M.D., New York; Description of a Jaeger Ophthalmoscope, as modified by George Strawbridge, M.D., Philadelphia; Gunshot Wound of the Brain, followed by Fungus Cerebri, and Recovery with Hemiopsia, by W. W. Keen, M.D., and William Thomson, M.D.; Detachment, of the Retina, with Laceration at the Macula Lutea, by Henry D. Noyes, M.D., New York; Report of Passavant Operations with and without Ether, and also under Nitrous Oxide, by B. Joy Jeffries, M.D.; Case of Readjustment of the Levator Muscle of the Upper Lid, by John Green, M.D., St. Louis, Mo.; Additional Note upon the Use of Atropia in the Treatment of Incipient Stabismus, by the same author; Paralysis of the Trigeminus, followed by Sloughing of the Cornea, by Wm. F. Norris, M.D., Philadelphia; A Case of Congenital Fissure of the Lids, by W. W. Seely, M.D., Cincinnati; Congenital Absence of both Eyeballs—Two cases, Reported by Geo. Strawbridge, M.D., Philadelphia.

The following gentlemen were re-elected as Officers for the ensuing year: *President*, Dr. H. W. Williams, of Boston; *Vice-President*, Dr. C. R. Agnew, of New York; *Recording Secretary and Treasurer*, Dr. Henry D. Noyes, of New York; *Corresponding Secretary*, Dr. H. Althof, of New York; *Committee on Progress of Ophthalmology*, Dr. B. Joy Jeffries, of Boston; *Publishing Committee*, Drs. Loring, Roosa, and Noyes.

On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys. By Thomas Clifford Allbutt, M.A., M.D., Cantab.

It is with great pleasure that we call the attention of our medical brethren, general practitioners, as well as specialists, to this valuable contribution of Dr. Allbutt. It aids very materially in filling up a long-existing vacuum in ophthalmic medicine; for although many of the subjects contained in it have already been discussed in scattered articles in the periodicals, most of them have been in a foreign language, and this is the first attempt that has been made to collect in a single volume the views of distinguished writers. The value of the work is very much enhanced by the careful investigations of Dr. Allbutt himself, who has brought to the work an amount of painstaking labor, caution, and fairness of discussion truly admirable. The diseases treated of in the separate chapters are all represented by a large number of cases contained in the appendix, and in reviewing the work we shall discuss each chapter by itself.

In speaking of the anatomy of the optic nerve and retina, the author gives a very correct idea of the causes of optic nerve-trouble, viz.: that it is "due to its own structure and attachments, to its rich vascularity, its large share of connective tissue, and its extensive relations with parts at the base of the encephalon; and not in any way to its especial attitude as a sense, not even in such diseases as locomotor ataxy." He emphasizes very properly the necessity and importance of examining the field of vision in all cases where the optic nerve is affected. He calls special attention to the great vascularity of the optic nerve, indirectly connected with the cerebral vascularity, and to a great degree independent of the retinal circulation; but omits mention of the intimate anastomosis between the retinal and nerve-vessels, which is a very important point. The anatomy of the optic nerve and its intimate connection with the brain is very carefully and accurately given, and this latter point cannot be to highly valued nor too often brought to our mind. Dr. Allbutt very justly calls attention to the small radiating vessels of the disk, and their increase in size and number in congestion and inflammation. He discredits the statement that the sympathetic nerve exerts any influence in producing a change in the disk and retina. One of the most important points in this chapter is the distinction which the author draws between anæmia and atrophy of the disk, and between partial and complete anæmia, and also that between ischæmia papillæ and optic neuritis. Ischæmia papillæ is confined to the disk, and is a congestion of the vessels; it occurs much more commonly than neuritis, and in it the nerve-tubes undergo little or no injury. In true neuritis, on the contrary, the connective elements suffer first, then the nerve-fibres, and the subsequent congestion is slight. It affects the nerve-trunk, and hence is called "neuritis ascendens." Dr. Allbutt thinks that the "consecutive atrophy" of Hughlings Jackson, distinguished by the ragged edges and blurred outline of the disk, is not distinct from the simple or progressive atrophy, distinguished by its clean-cut outline and brilliant appearance, but is merely an earlier stage of it, before the exudations have been absorbed.

The article on primary atrophy of the optic nerve is very complete, and proves the author to be possessed of nice powers of observation. He gives four causes for this form of atrophy, viz.: 1st. Any tumor or patch of inflammation in the course of the nerve behind the eye, which severs the nerve-fibres and leaves the separated parts to wither. 2d. Destruction of the centres of vision making the nerve useless. 3d. A sclerotic process associated with patches of sclerosis elsewhere, as in the spinal cord or encephalon. 4th. Deficiency of nutrition, as is seen in senile degeneration of the arteries and in embolism.

The chapter on the relation between certain intracranial disorders and affections of the optic nerve and retina is the most voluminous, and perhaps the most important in the book. It is very carefully written, and presents a mass of very interesting statements illustrated by cases in the appendix. Many of the statements are recognized as facts by ophthalmologists generally, but some of them cannot be considered as satisfactorily proven until fortified by a larger number of cases. We agree most cordially with Dr. Allbutt, however, when he says, "the occurrence of papillary ischæmia or optic neuritis in any person ought to awaken the gravest suspicions of cerebral disorder, and the occurrence of simple atrophy should suggest great watchfulness."

In speaking of the influence of epilepsy upon the appearance of the disk, Dr. Allbutt thinks that cerebral venous congestion may have the same effect upon the disk as cerebral anæmia, but that an ophthalmoscopic examination should always be made in the intervals of the attacks as well as during the convulsion. He also thinks that the anæmia of the disk, as well as the congestion, may persist for hours, and even days, after the attack. In tubercular meningitis, the author thinks that the exudation at the base of the brain may press upon the cavernous sinus, or the inflammation may involve it, in which case we have ischæmia papillæ; or the inflammation may creep down the nerve and cause neuritis, both of which states may be, and generally are, followed by atrophy. We think Dr. Allbutt attributes too much importance to the appearances of the disk in cases of children suffering from symptoms of meningitis, for the congestion of the disk may be caused by the simple straining in the vomiting, and is by no means necessarily connected directly with brain trouble. Still the author is very cautious and fair in all his statements, and very correctly asserts that tubercular meningitis is only revealed to the ophthalmoscope when it invades the anterior and inferior parts of the encephalon near the optic tracts.

In hydrocephalus Dr. Allbutt says that ischæmia papillæ is the earliest change; but subsequently the disks and retinæ become wholly disorganized, and the optic nerves atrophy from pressure or from abolition of their function. The changes are mainly due to pressure or severance of central connections, though, perhaps, some inflammatory action and proliferation may also be present.

The section upon intracranial tumors constitutes almost a monograph in itself, and exemplifies perfectly the caution and strictness with which the author selects his own cases, and sifts the evidence of authors. He admits that we cannot say when to expect eye-symptoms in the course of intracranial tumors; what conclusions to draw from them when present, or how to explain their occurrence in many cases; but insists that by the use of the ophthalmoscope we do gain very important information. We have here to answer two questions, viz.: Is there an encephalic tumor present? and if so, what is its size and situation? It being conceded that changes in the optic nerve are a frequent accompaniment of tumors, we must inquire what are the conditions of this coexistence. The author gives in full Benedikt's hypothesis of the cause of the ophthalmoscopic appearances, and then very carefully shows what he considers to be its fallacies. In answer to Benedikt's first point, that trophic disturbances are due to disturbances of the circulation set up by direct or indirect pressure, he admits that pressure will set up these changes, but asserts that the agent in many cases is not mere local pressure, but a general elevation of intracranial tension due to excess of contents. He admits Benedikt's second point, that a neuro-retinitis caused by a tumor can be entirely reduced without any diminution in the size of the tumor; but says it is not common, and asserts that the growth of a tumor is attended with destructive effects which might soon compensate the encroachment of the tumor itself. Benedikt's third point, that it is difficult to see why the congestive phenomena should set up mechanical hindrance in no other circulation, and should cause pressure upon no other nerve-district than that of the eye only, he explains away by the fact that a rapidly growing tumor would compress the surrounding tissues and greatly increase tension, which would become specially manifest in the disks on account of the multiplying action of the scleral ring. In answer to Benedikt's fourth point, that a neuritis descendens can only be admitted if the amblyopia sets in without ophthalmoscopic appearances, and the changes in the disks show themselves gradually; he again insists upon the necessity of distinguishing between ischæmia papillæ, where the disk alone is affected, and that condition in which the whole length of the optic nerve is in a state of active hyperæmia with cell-proliferation. We should always remember that neuritis is not so much a disease of the nerve as of nerve-investment. Dr. Allbutt insists very properly that neuritis, properly so-called, does not coexist with non-inflammatory intracranial disease, but that the latter rather gives rise to ischæmia, while, on the other hand, primary neuro-retinitis accompanies inflammatory disease. The passive hyperæmia, helped by the action of the scleral ring, produces the choked disk, while the phenomena of neuritis point to a biological process of cell-proliferation due to inflammation, that is, to meningitis, or, in rare cases, to encephalitis. The atrophy of the optic nerve, found in connection with intracranial tumor, Dr. Allbutt holds to be due to the crushing or dividing action of tumors of the base, or from the pressure of hydrocephalus upon the optic tracts or centres. The division of the intracranial cavity into seventeen regions, in order that we may know what symptoms follow the growth of a tumor in any of them, we do not think is justified by experience, and hence is to be regarded as unnecessarily complicating. In referring to tumors of the tubercula quadrigemina, Dr. Allbutt does not go so far as to assert that obliteration of the quadrigeminal bodies must cause blindness; but he does think that injury of these bodies causes amaurosis, which also accompanies the destruction of parts lying near them, and that here loss of vision preceded a progressive atrophy of the optic nerves. One assertion of the author will be admitted by all ophthalmologists, viz.: that the nearer the tumor approaches to the anterior and middle fossæ of the skull, the more frequently does amaurosis occur, and in a tumor of the middle fossæ the optic nerves seldom escape. In cases of persons struck down by apoplexy, the author has frequently found a degree of nerve atrophy, attended with some degree of loss of vision, and thinks it due to atheroma of the encephalic arteries, and may be recognized in some degree as a forerunner of apoplexy. This, however, needs confirmation.

Dr. Allbutt calls particular attention to the tendency of the optic nerve to atrophy in almost all cases of general paralysis. The change is sometimes simple white atrophy of the optic nerves, more commonly preceded by redness, and not infrequently results in complete amaurosis. The pathological characters are: dwindling of the proper nerve-structure, and overgrowth of the connective tissue. The author gives several explanations for the change, viz.: 1st. If luminous impressions are perceived in the cortical matter, it might be expected that as the perceptive centres wasted in disease, the optic nerves would waste from disuse. 2d. The degeneration of the optic nerves may be due to atheroma of the vessels. 3d. The most probable explanation is to be sought in the peculiarity of the primary morbid change and in the anatomical character of the tissues which it invades. It seems safe to say that the optic nerves are more liable to sclerosis than other nerves, which we should expect from their vascularity and richness in connective tissue.

The ophthalmoscopic signs of disturbance of the optic nerve and retina in diseases of the spine are divided by Dr. Allbutt into two kinds: 1st. Simple or primary atrophy of the nerve, sometimes accompanied by slight hyperæmia and active proliferation, which make up chronic neuritis; and, 2d. A characteristic

hyperæmic change, occurring only in cases of injury to the spine, in which the arteries become indistinguishable, while the veins are swollen and tortuous, and the disk assumes the appearance of ischæmia. In trying to explain how these changes are caused, Dr. Allbutt objects to Wharton Jones's view, that in injury of the spine the sympathetic nerve is involved, and as this governs the blood-vessels, and the latter the nutrition, therefore the changes are due to irritation of the sympathetic; but he admits that he is not able to propound any more satisfactory theory. He thinks atrophy of the disks is always due to slow degeneration of the cord, while the choked disk and neuritis are not peculiar to spinal disease, but are met with in encephalic disorders; and the neuritis is seen in injury of the cord, particularly in sclerosis of the posterior columns.

In disorders of vision associated with albuminuria, Dr. Allbutt distinguishes two kinds, viz.: 1st. Attacks of partial or absolute blindness, coinciding with the uræmic poisoning state; 2d. Impairments of vision, which advance more gradually, last longer, and are dependent upon visible changes. The first, called uræmic amaurosis, may exist alone, or may precede or complicate the second or retinitic amaurosis. It may precede any symptoms of renal disorder, and cannot be demonstrated by the ophthalmoscope. The changes of the second form are in the retina, are partly fatty, partly a sclerosed action, and involve the nerve-tissue as well as the connective-tissue framework of the retina and the adventitia of the vessels.

Speaking of leucæmic retinitis, the author thinks that the hypothesis of adenoid tumors in the retina of leucæmia must be abandoned, as not based upon sufficient evidence, and that we must fall back upon the belief that leucæmic, like albuminuric retinitis, is a combination of hemorrhagic with irritative events; but that in both diseases we are as yet in want of further evidence as to the mode and causation of the latter. As regards the form of retinitis associated with syphilis, the author is strongly inclined to coincide with Mr. Oglesby in attributing to it peculiar destructive appearances. We do not agree with him on this point, but think the retinitis to be similar in appearance to other forms of simple retinal inflammation, and that a diagnosis of a specific cause can only be made from coincident general symptoms, though we are aware that many good observers, particularly among our German contemporaries, agree with Mr. Oglesby.

The chapter on toxic amaurosis is very interesting. Speaking of alcohol poisoning, the author very justly says: "As in uræmia, so in this, there is an amblyopia potatorum with ophthalmoscopic signs, and an amblyopia without them. The latter defect is not rare, and may be due to congestion of the choroid, with consequent pressure upon the layer of rods and cones of the retina. The other kind of amblyopia seems to depend on this same congestion, with consequent tissue-degeneration of the optic nerve. Dr. Allbutt passes over the subject of tobacco-amaurosis very lightly, regarding it as not yet satisfactorily proven. In lead poisoning he thinks that the atrophy of the optic nerve sometimes met with is occasionally preceded by a stage of subacute irritation.

In the article on hypnosis and narcosis, Dr. Allbutt speaks of two kinds of sleep, viz.: Sleep, artificial or natural, due to anæmia; and sleep, artificial or natural, due to venous congestion of the capillaries; and he thinks it probable that narcotics produce their effect by venous hyperæmia of the brain.

In conclusion, we would most cordially recommend Dr. Allbutt's book to the perusal of every practitioner, as a very valuable contribution to medical science.

THE PHYSICIAN'S DAILY POCKET RECORD: Comprising a Visiting List, etc. By S. W. BUTLER, M.D. Philadelphia, 1871.

THE objectionable feature of this book is the amount of printed matter which it contains. A memorandum with its pocket full of cards, prescription blanks, etc., is at best an awkward burden to have always in one's coat-pocket, and is a sufficient reason for leaving out such matter as tables and directions for urinary analysis —which can only be undertaken in a physician's office —and lists of remedies and doses other than such as require special care in their use. If a list of new remedies is added, it should only include such as are yet on trial, and regarding whose merits the majority of physicians are undecided. Such a list, with doses and therapeutical indications as far as known, might aid in advancing greatly our knowledge of such remedies; but we can hardly think it necessary to put into such a category the bromide of potassium, as regards its influence in epilepsy, pumpkin seed as an anthelmintic, ipecacuanha for dysentery, Monsel's salt as a styptic, or carbolic acid as a disinfectant. Whereas, we would expect to see something said about chloralum and nitrite of amyl, which we do not in the present instance. That portion of the book devoted to the visiting list, record of obstetrical cases, vaccinations, deaths, etc., is very commendable, the visiting list especially so, as it can be used for any year, from any date, and for any number of patients, without waste of room. The use of springs in the cover to keep the book closed, thus doing away with the need of an elastic band or tuck, is a very great convenience.

PULMONARY CONSUMPTION; its Nature, Varieties, and Treatment, with an Analysis of One Thousand Cases to exemplify its Duration. By C. J. B. WILLIAMS, M.D., and CHARLES THEODORE WILLIAMS, M.D. Philadelphia: Henry C. Lea, 1872. 8vo, pp. 315.

THIS volume, containing as it does a summary view of the opinions of a gentleman whose "experience in diseases of the chest in private practice during the last forty years has probably not been exceeded by that of any other physician," complemented by statistics of 1,000 cases selected from his note-books during a period of twenty-two years, its practical value to the medical practitioner is very great, independently of any approval or disapproval of the author's theory of consumption. This theory, which the senior author has advanced for more than forty years, and which receives support from modern pathological research, is, "that the tuberculous and kindred lesions which cause consumption of the lungs, arise from a degradation of the plasma or nutritive material by which old textures are renewed and new ones formed." "This material, or protoplasm, is seen in an inflamed part of a living animal in the form of *sarcophytes* or *bioplasts*, multiplying and clinging to the insides of the blood-vessels, penetrating their walls, and emigrating by a movement of their own into the adjoining tissues. Like other forms of animal and vegetable protoplasm, these sarcophytes have vital endowments of motion, growth, power of absorbing and digesting various matters from without, and of multiplying by division, and probably also by gemmation and endogenous proliferation."

These sarcophytes or pale corpuscles exist naturally in very small numbers in the blood, but in greater abundance in the lymphatic system, and they may multiply and decay independently of inflammation, constituting a true scrofula; when overcrowded and hardened from loss of their plastic and self-sustaining power, they become the gray tubercles, obstructing the

adjoining tissues, and irritating them, and in themselves prone to decay.

The causes of consumption are classed as follows:—

1. *General causes*, which by their weakening influence on the constitution generally predispose to consumption. Such are family predisposition, want of pure air and good food, continued fever, scarlatina, measles, cessation of discharges, miscarriages, bad confinements; and over-lactation, mental depression, dampness of habitation.

2. *Local causes*, the effects of which are limited at first to the lungs, but may at a later date extend to the system. These are: attacks of bronchitis, hooping-cough, and croup; attacks of pleurisy and pneumonia; attacks of asthma; trades and occupations giving rise to a dusty or gritty atmosphere; injuries.

The 1,000 cases selected for statistical purposes are taken from notes of about 25,600 cases, accumulated during some thirty years, representing all the cases of any gravity in which the author has been consulted in private practice. The average duration of the 1,000 cases was nearly eight years. They are divided into two groups; phthisis of inflammation, and phthisis of constitutional origin. The first group includes varieties designated as fibroid, suppurative, chronic pneumonic, scrofulous pneumonic, catarrhal, albuminous, hemorrhagic, and others more or less mixed, and in their course assuming more or less of the form of constitutional phthisis. The second group includes acute tuberculosis, chronic tuberculosis, and scrofulous consumption. These are represented as varieties of one common disease, varieties not always distinct and easily passing into one another.

With regard to the treatment of consumption, our author, on taking a retrospect of an experience of forty years, can trace a remarkable improvement in its success. This is due, in great measure, to the use of cod-liver oil, in connection with the liberal use of nutritious food, and the administration of tonics. The tonics on which most reliance is placed are quinine and iron, but they are not deemed useful as long as there exists any inflammation, active or intercurrent. Under these circumstances calumba, cascarilla, and chiretta are preferred. The oil recommended is the pure pale oil. The best time for its administration is immediately after a solid meal, or at or before the meal, for those who prefer it so. It thus forms part of the chymous mass, less apt to rise by eructation, and less apt to disorder the stomach. It is given with an aromatic bitter, acidulated with a mineral acid, and, where a tonic is given, it is added to the dose of oil, the dose of which should rarely exceed a tablespoonful twice or thrice a day.

With regard to climate, it is advisable that the patient should breathe as pure an air as possible, and that its beneficial influence should be increased by such gentle and varied exercise in it as his strength and the conditions of his organs will permit.

The separate points of special forms of phthisis and their management are treated of fully and in sufficient detail.

Consumption is such a fearful destroyer of human life, that every valuable communication concerning it demands the serious attention of the physician. He will find much to admire, and much to follow, in this useful summary of a well-known and distinguished author.

A Practical Treatise on Bright's Diseases of the Kidneys. By T. Grainger Stewart, M.D., F.R.S.E. Second edition. New York: William Wood & Co. 1871.

We welcome this work as a model of what a second edition should be. The revision of the first edition, which appeared in 1868, has been very thorough. The size of the volume has been nearly doubled, the additions consisting mostly of reports of cases which are of great interest, and strongly enforce the views of the author on certain disputed points in the pathology of Bright's Diseases. A supplementary chapter has been added on "The Complications of the Different Forms of Bright's Disease," and two new lithographs have been introduced. But, besides these improvements, the work bears evidence of careful attention to the minuter details of revision. Sentences are reconstructed, positive statements qualified, new modes of treatment suggested; in a word, the author gives us the results of three years' additional study of these "well-known but little understood diseases." To review this book as its merits deserve would require more time and space than we can command, but it may be of interest to notice a few points in pathology in which the author differs from the views expressed by Dr. Dickinson in his work on Albuminuria. Dickinson adopts the classification of Virchow, according to which the different forms of Bright's Disease are distinguished by the tissue primarily and principally affected. When the renal tubules are the principal seat of the morbid process, we find the large red or the large white kidney the result of an acute or of a chronic tubal nephritis; when the affection starts with and is chiefly confined to the intertubular matrix of the organ, we have the contracted, granular or cirrhotic kidney; thirdly, the amyloid or "depurative" disease, which primarily affects the walls of the smallest arteries, especially the convolutions composing the Malpighian tufts, but subsequently extends, by exudation of the amyloid material, to the intertubular spaces, and may ultimately lead to diminution in the size of the organ through contraction of the exudation. Stewart's classification is widely different from this, but is, we are convinced, more in accordance with recent pathological views. His division is as follows:—

"1st. *The inflammatory form*, of which there are three stages.

a. That of inflammation.
b. " " fatty transformation.
c. " " atrophy.

2. *The waxy or amyloid form*, of which also there are three stages.

a. That of degeneration of vessels.
b. " " secondary changes in the tubes.
c. " " atrophy.

3. *The cirrhotic, contracting or gouty form.*"

According to the author, an atrophied kidney may belong to any of these three divisions; Dickinson would exclude it from his first division, tubal nephritis. Stewart thus expresses his views in regard to the relation between tubular inflammation and atrophy of the kidney. "The first stage is that of inflammation, in which exudation is poured out, and a destruction of the epithelium takes place. This exudation, affecting a large number of tubules, leads to enlargement of the organ, and also to fatty degeneration of the epithelium; its absorption or removal leads to ultimate atrophy." The granular or "uneven surface is due to the irregular affection of the tubules, some being involved and undergoing atrophy while others escape, . . . and not to the contraction or outgrowth of connective tissue."

Dickinson dissents emphatically from the view that a granulated contracted condition of the kidney may result from a tubal nephritis. "If," he says, "in simple tubal nephritis, the loss of the contents of the tubes ever suffices to reduce the once enlarged kidney below the natural bulk, such a result must be of rare occurrence, since no unequivocal instance has fallen under

the observation of the author." Case No. XIX. in the present work bears directly upon this point. We have not the space to quote it, but any one interested in renal pathology would be amply repaid by carefully studying Dr. Stewart's commentaries upon it. That this form of atrophy is not of frequent occurrence is doubtless due to the fact that patients with this variety of Bright's Disease generally recover or die before this stage of degeneration is reached. The microscope will generally show, in a kidney thus contracted, a relative excess of connective tissue, but this degeneration may be distinguished from a true cirrhosis by noticing the considerable amount of disease in the tubes not yet obliterated, and the absence of the characteristic broad masses of connective tissue found near the surface of a cirrhotic kidney.

Our author vigorously combats Dr. Dickinson's views as to the pathology of the amyloid disease. He agrees with him that the amyloid material consists of an albuminoid substance probably deficient in alkali, but he denies that it has any necessary or constant relation to the suppurative process as indicated by Dickinson's unfortunate term "depurative disease." In 18 cases coming under the author's observation, only 6 were found, after careful examination, to have suffered from a past suppuration. He maintains, moreover, that the disease is essentially a degeneration of tissue, and in no sense an infiltration by any ingredient of the blood. "That it is not an infiltration," he says, "will become apparent if we consider the parts it affects. We have seen that it affects the cells of the liver. This might well be a result of infiltration, for we constantly see the same structures loaded with fat which has been poured out from the blood. But far more generally throughout the body it affects small arteries. How is this to be explained on the infiltration theory? How can it happen that the small arteries—nay, the small arteries of certain organs—nay, the middle coat of the small arteries—should be the chosen seat of deposit of a material poured out from the blood? If it be poured out from the blood, why does it so generally confine itself to the walls of arteries and unstriped muscular fibre? Why does it not infiltrate the parenchyma of organs? Why does it, in the intestine, as it flows from the blood, confine itself to the walls of small vessels, to the muscles of Brücke, to the epithelium? Why does it not pass out among the cellular tissue of the villi, and become deposited there? These questions can scarcely be answered by those who hold the infiltration theory. On the other hand, how exactly the characters correspond to those of degeneration,—certain tissues always primarily affected, those tissues presenting every degree of alteration from the slightest to the most distinct, the surrounding parts remaining unaffected. The closest analogy exists between what is seen in this and in the atheromatous and calcareous degenerations, the former affecting the inner coat of arteries, and especially the deeper layers, the latter, when primary, affecting the middle coat. Both are independent diseases originating in the tissues, not even secondary results of infiltration."

By the cirrhotic kidney our author understands "an *hypertrophy* of the connective tissue, and a consequent atrophy of all the other structures." He objects to the term *granular kidney* because the same condition is found in the third stage of the inflammatory and amyloid diseases; to the term *gouty kidney* because the disease often occurs independently of gout; to the term *contracting kidney* because contraction is not peculiar to this variety; and to "*intertubular or interstitial nephritis*" because there is no evidence of inflammation. He holds to the non-inflammatory nature of the morbid process, and denies that there is any evidence that an inflammatory exudation takes place into the intertubular spaces. Further investigations are needed in regard to the essential phenomena of inflammation before this question can be discussed in an entirely satisfactory manner.

We congratulate the publishers on the creditable style in which the work is issued. The cloth binding has the American merit of being firm and substantial. Why is it that our English brethren persist in so fastening their cloth bindings that they fall to pieces after the book has been used half a dozen times? The paper, letter-press, and lithographs, plain and colored, are excellent, and we heartily rejoice that the time has come when a physician can gratify his taste for handsome books in his medical as well as in his literary library.

THE SCIENCE AND PRACTICE OF SURGERY. Illustrated by four hundred and seventy wood engravings. By FREDERICK JAMES GANT, F.R.C.S., Surgeon to the Royal Free Hospital; formerly Surgeon to Her Majesty's Military Hospitals, Crimea and Scutari. Philadelphia: Lindsay & Blakiston. 1871.

IN the preface of this work, we are told that now many years have elapsed since a new systematic work representing the science and practice of surgery has appeared in his country, and that it is the aim of the writer to give a full but condensed embodiment of all those changes in the pathology and treatment of injuries and diseases which the progress of surgery has established. Evidently the intention of Mr. Gant has been to make a big book, and certainly in appearance it is very pretentious, to say the least. By gleaning largely from the writings of English surgeons, and perhaps chiefly from the articles contained in Holmes' System of Surgery, the book has grown to one of considerable size. Indeed, we must look upon it pretty much in the light of an epitome of the more recent English authors, and as such it must be regarded as a work of no little value. In a book of this kind, however, we think its value would have been greatly enhanced, if the writings of Continental as well as American authors had been a little more consulted. Had this been the case, in our judgment both the pathology and the treatment advocated in many affections would have been more in keeping with the progress of science than we find to be the case in many parts of this work. Full and due credit has been given to all the sources whence information has been derived, and throughout the work the author's own surgical experience and pathological observations have been freely interspersed.

The subject of inflammation is considered entirely in accordance with the views which have been adopted by most English writers, and differs but little, if at all, from what was taught many years ago. We were no little surprised that in this field the labors of the German pathologists were hardly noticed. No reference is even made to the researches in this direction by Stricker, Recklinghausen, or Cohnheim. Should our author even dissent from these views, he should, at least, have acquainted the reader with the more modern views on this important subject.

Tumors we find classified into those that are localized (not infiltrating), which includes some of the recurring varieties, and into the infiltrating growths, as the varieties of cancer. The whole subject of these growths is but briefly referred to, with the exception of that of cancer, which is more fully and much more satisfactorily treated. While reading the chapter on tumors, it is with difficulty that one can persuade himself that

he is not turning over the pages of Mr. Paget or Mr. Moore's excellent treatises on this subject, as found in Holmes' Surgery.

Were we to criticise the chapter on syphilis as we believe it deserves, we should take up more space than can be allotted for a notice of the whole work. Did we desire to thoroughly confuse a student on the subject of syphilis, we could not succeed better than ask him to read this chapter. Mr. Gant states his views incline to the opinion "that while the indurated chancre possesses the greater power of producing constitutional syphilis, and is thence the most frequent cause; yet that *soft* chancres may also occasionally have this causative relation. Hence, they also may be regarded as forms of primary syphilis." We were no little surprised to find the statement here made that a chancre on the glans penis never acquires induration. Suffice it to say, that this article savors more as if it came from the pen of one whose information had been derived from reading, rather than from actual experience in the study of this disease.

While speaking upon the subject of the treatment of erysipelas, especially in those cases where the skin is tinged with a yellow hue, even when "verging on jaundice," we must dissent from the view here expressed that this condition is best overcome by *the repeated* (italics our own) administration of calomel or blue pill, to restore the secretion of bile. Cases presenting these symptoms which have passed under our observation would have exhibited a very unpleasant result from such treatment.

Pyæmia is treated not in accordance with the more recent views that pathologists have advanced, and the same is to be said in reference to phlebitis. When describing the symptoms of pyæmia, no mention is made as to the rapid rise of temperature, as indicated by the thermometer just before and during the period of chills, &c.; nor are the diseases which the student might mistake it for mentioned, nor is he told the usual duration of the disease.

The chapter on gunshot wounds is very meagre, and certainly not such as we would have expected to have emanated from one who has been a military surgeon. Had some reference been made to the experience gained in our late war in regard to these wounds, it would have considerably enhanced the value of this portion of the work—at least to the American reader.

Injuries and diseases of the nerves are very unsatisfactorily treated, and in no way is it a creditable chapter to its author, not being up to the requirements of a work of this kind. Little or nothing is said in regard to wounds of nerves, and the various operations that of late years have been performed for the relief of neuralgic affections are not even alluded to.

The succeeding chapter, however, on aneurism, is very well written. While referring to ligature of the innominate artery, we find the statement made that it has been tried in eleven cases, and that they were all fatal. No reference is made to Dr. Smyth's successful case, which we believe makes the twelfth reported case of ligature of this vessel. Here, as in very many portions of the work, Mr. Gant appears to have been utterly ignorant of what has been accomplished in surgery on this side of the water.

The chapter on fractures gives us a good description of these lesions, and is well illustrated by the time-honored woodcuts. The treatment, however, recommended in this work must strike American surgeons in many cases as somewhat antiquated. For fractures of the femur we find that Liston's long straight splint will be found most effectual in *all* fractures of this bone, and extension is to be made by confining the foot to the splint by a figure-of-eight bandage!

What has been said in regard to fractures applies also to dislocations. The principal obstacle in reduction our author attributes to the muscles, and but little reference is made to the ligaments, which we believe at the present day are regarded by many as offering the chief obstacles to reduction. No reference is made, while speaking of dislocations of the hip, to Dr. Bigelow's work on this subject, and only brief reference is made to reduction by manipulation.

With regard to the chapter on diseases of the eye, it may be considered as a slight improvement upon the manner which we find these diseases treated upon in the majority of text-books on surgery. Had Mr. Gant followed some other ophthalmologist than Mr. Dixon, we have no doubt the chapter on diseases of the eye would have been more in accordance with the present state of ophthalmology.

Though this work is faulty in many respects and invites criticism, there is much to be found in its pages which will be very valuable either to the student or practising surgeon. Under this head we would especially refer to the articles on resection of the joints, injuries of the brain and spinal cord, together with the subject of curvature of the spine, and the chapter on the diseases of the genito-urinary organs.

MEDICAL THERMOMETRY, AND HUMAN TEMPERATURE. By C. A. WUNDERLICH, M.D., and EDWARD SEGUIN, M.D. New York: Wm. Wood & Co. 1871.

WITHIN the past five years much attention has been paid to the use of the thermometer as a means of investigation in clinical medicine and diagnosis; and though very many practitioners were convinced of its value and utility, it has not as yet come into such extensive use as it undoubtedly will hereafter, as we now have a concise manual on the subject to serve as a guide in the study of its use. The observations published in the work of Dr. Aitken were the first, we think, of any importance to call the attention of the profession to the real value of the instrument; and though, from time to time, we have had more or less elaborate articles upon its use in various diseases, we were wholly in want of a hand-book treating of the whole subject. Consequently, though the thermometer is quite largely used here, it may be said, we think with truth, that its use is nearly confined to those who have had opportunities for the study of its applicability in the various large hospitals. Within a year we have had a translation of the encyclopædic treatise of Wunderlich, which, besides being inaccessible to those who are not subscribers to the publications of the Sydenham Society of London, is objectionable on account of its great length and detail, and will be consequently of no real value to the majority of practitioners. To render this work available to American practitioners, Dr. Seguin has with great industry and care abridged it very materially, and at the same time has enriched it with a résumé of his own extensive observations, and the result is a very convenient and comprehensive hand-book, which is especially adapted to the wants of the busy practitioner. The work is divided into two portions: first, the abridgment of Dr. Wunderlich's treatise; and second, the supplementary chapters by Dr. Seguin.

We find in the opening chapters a concise and brief history of the instrument; followed by a consideration of the fundamental principles and of the art of medical thermometry, which contain facts which, we think, should be thoroughly mastered. The observations upon local alterations of temperature in disease will no

doubt be novel to many, and should be read in connection with the remarks made later on in the work by Dr. Seguin, who has devised the surface-thermometer to determine these local elevations. This instrument has, by the zeal and skill of Dr. Seguin, been brought to a high degree of perfection, and will no doubt be of essential service in clinical study. Among the other introductory chapters which deserve especial attention are those treating of typical alterations and of the daily fluctuations in disease. The various febrile diseases are then treated of in their order, and the thermometrical peculiarities of each clearly brought out.

The observations appended by Dr. Seguin are in the highest degree practical, and materially enhance the value of the work; indeed, we rarely find a foreign author's treatise brought before the profession in such a masterly manner. The work is profusely illustrated by diagrammatic schemes, which add very much to its utility.

THE SCIENCES OF NATURE *versus* THE SCIENCE OF MAN. A PLEA FOR THE SCIENCE OF MAN. By NOAH PORTER, President of Yale College. New York: Dodd & Mead. 1871. pp. 98. An Essay delivered before the Phi Beta Kappa Societies of Harvard and Trinity Colleges.

WORKS of this class are much needed at the present time, when books on metaphysical questions are scarcely intelligible except to the student. The subject is treated in a popular and entertaining manner, and is well worth the attention of the general reader who seeks amusement coupled with instruction. The larger part of the essay is a terse review of the philosophies of Comte, Mill, Spencer, Huxley, Darwin, etc., and demonstrates conclusively that they will not stand the tests which they themselves apply to others. The author shows that all other sciences rest upon the science of man as the foundation, and that, without a knowledge of this as a basis to start from, the pursuit of the others is difficult and uncertain.

The volume is correctly printed in clear type, on good paper, and is one of the many valuable productions which have been recently published by this well-known publishing house.

PROCEEDINGS OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, PART II.—April to September, 1871, inclusive. Philadelphia, 1871; pp. 274.

THIS number of the published proceedings contains several interesting articles; for example, the paper of Prof. Marsh On Some new Reptiles and Fishes from the Crustacean and Tertiary Formations, discovered during the exploration of the Yale Scientific Party in the Rocky Mountain region, last summer; On Remains of Extinct Mammals from Wyoming, by Joseph Leidy, M.D.; and a paper by Elliot Coues, consisting of Notes on the Natural History of Fort Macon, N. C., and vicinity (No. 2).

Mr. Isaac Lea contributes the descriptions of twenty new species of Unimidæ of the United States; and Mr. F. B. Meek, the descriptions of new species of fossils from Ohio and other Western States and Territories; and the notice of a new Brachiopod.

TWINS IN PENNSYLVANIA.—The census statistics show the following facts: One family in Pennsylvania is credited with seven pairs of twins; one with six pairs; and another with four pairs. The mother of the last group has six other children, and is only thirty-eight years of age.—*Med. and Surg. Reporter.*

New Instruments.

A NEW NEEDLE-FORCEPS.

By J. S. PROUT, M.D.,

SURGEON TO THE BROOKLYN EYE AND EAR HOSPITAL.

THERE are certain objections to nearly all of the needle-forceps used in operations on the eye, especially to those which are closed with a spring catch. I have seen the best of these, in the most skilful hands, tear the needle out of the conjunctiva in consequence of the jerk or jog communicated by the spring to the instrument in releasing the needle. To obviate this objection, Messrs. Tiemann & Co. made for me the forceps of which the accompanying cut is a reduced representation. As now made, it is 4¼ inches long, very light, and when closed occupies scarcely more space than an ordinary lead pencil of the same length. The figure shows its construction and action so well that it seems unnecessary to describe it. In use, the jaws grasp the needle very firmly, and are kept securely closed by the sliding catch, upon the roughened head of which the thumb rests. The elasticity of the arms of the handle opens the jaws to the proper extent. The little pin at the end is to prevent separation and lateral motion.

The forceps has very successfully stood the test of use in my hands, and is found to be a favorite with those who need such an instrument.

After it was made, I learned that the device for separating the jaws was not new, as I had supposed. I have seen since then a nearly similar needle-forceps of prior construction.

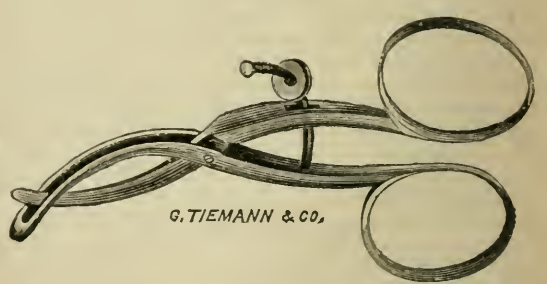
My friend, Professor Skene, tells me that this forceps (of larger size, of course) will be a valuable addition to the instruments used in operating on the perinæum and within the vagina.

BROOKLYN, N. Y., January 6th, 1872.

CURVILINEAR FORCEPS FOR FACILITATING THE LIGATION OF HEMORRHOIDAL TUMORS.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.



I WOULD respectfully call the attention of the profession to the curvilinear forceps represented by the accompanying wood-cut. Its construction is exceedingly simple, and its mode of action novel and effective. It was expressly designed for the purpose of temporarily compressing the basis of hemorrhoidal tumors, especially

when large. This compression it firmly and most effectually makes in a uniform manner, thus preparing the tumor for the more easy and ready adjustment of the ligature upon its already compressed and strangulated base. By the use of this instrument the operator, without the aid of an assistant, is enabled to apply, adjust, and tighten the ligature with the greatest facility and precision.

The instrument was not intended as an *écraseur*, but it will at once be perceived that it can be easily and successfully so employed. It will also be readily observed, from the construction and the operation of it, that with slight variation it is peculiarly adapted as an ovariotomy clamp. In this respect, if it is not superior, it is at least not inferior to any ovariotomy clamp extant, so far as my knowledge extends. Should it prove to be so it would be important, for a good instrument for such a purpose is just now a desideratum, inasmuch as it appears to be the general opinion, and gradually becoming the settled conviction, of the most distinguished ovariotomists, that the very best treatment of the ovarian pedicle is to clamp it, either permanently keeping it external to the abdominal wound, or clamp it temporarily until it is completely ligated. It may also be applied to other and various surgical uses.

It will be seen from the drawing that this instrument, which needs but little explanation, has two blades curved on the edges, with handles curved on the flat. One blade has a fenestra its entire length, through which the other must pass in approximating or closing them. The coapting surfaces of the blades are rough, so as to secure a stronger hold and prevent the tissues from slipping. The handles are so curved that they do not press upon or otherwise interfere with the surrounding parts. The screw in the handles gives additional security during the operation, and obviates the necessity of an assistant. The forceps are removed as soon as the ligature is tightened.

The instrument was made by Messrs. George Tiemann & Co., 67 Chatham street, New York.

Progress of Medical Science.

The following is an extract from a report of the (Jan. 12, 1872) meeting of the Society of Physicians of Vienna, sent us by Dr. W. T. Alexander, of that place:

The Diagnosis of Syphilis, from Microscopic Examination of the Blood. By Dr. Lostorfer.—For a long time attempts have been made to discover the bearer of the contagion in syphilis. Hallier examined the blood of those suffering from the infection, and discovered a parasite, the micrococcus. The correctness of this discovery was doubted from many quarters. For this reason mainly the results of examinations of blood have remained, until now, unsatisfactory. The speaker believes that he has found the explanation of this in the fact that the examiners did not work with sufficiently high powers; further, that the examinations were almost entirely limited to *fresh* blood, which was believed to be more suited to examination. The speaker, in his researches, had avoided both errors.

Dr. Lostorfer began his examinations in August of the preceding year, Prof. Zeissl having, with the greatest readiness, placed the material of his division at his disposition. The blood was taken from syphilitic individuals, and after periods of from three to four days Dr. L. found constantly present small, shining corpuscles, on which he could sometimes discover processes jutting out. It was proven that these corpuscles increased by budding. New corpuscles were formed in this way, which again increased by sprouting. By the addition of different fluids, especially sugar-water or Pasteur's fluid, these corpuscles became shrivelled.

This result was so constant that Dr. L. was enabled to diagnose syphilis with certainty and precision, by observing the development of these corpuscles. He had undertaken eight or ten test examinations, which were given him partly by Prof. Stricker and partly by Prof. Hebra, and every time he told correctly, from microscopic examination of the specimens, which blood was taken from syphilitic and which from non-syphilitic subjects.

After having in this manner found his discovery tried and proven to be correct, he designated the little bodies by means of which he could certainly diagnose syphilis, as "syphilis-corpuscles." As regards their manner of development, the speaker said that it differed according to their number. In some cases more than fifty were seen in the field, in others a much smaller number. He also perceived a difference in regard to the time of their development. Sometimes they budded on the third, sometimes on the fifth day; in many cases, indeed, in twenty-four hours. As regards temperature, observation teaches that a too low degree of heat retards their development, but that the process went on unimpeded by variations of from 10 to 18° Cent. Differences in the manner of sprouting were also observed. Whether these syphilitic corpuscles are developed from the disease, or whether their germs pre-exist in the blood, and are only hastened in development by the infection, is still unsettled. He hoped by further examinations, in which he would be aided by Prof. Stricker, to become able to settle this question.

Towards the close of his remarks the speaker described the class of cases from which his examinations were made; they were patients from Prof. Zeissl's division, suffering from the most different secondary and tertiary manifestations. It was noteworthy that, as improvement took place under the use of various anti-syphilitic remedies, the syphilis corpuscles decreased in number in the same degree, and finally disappeared entirely from the blood.

Prof. Skoda took the floor in order to congratulate Dr. Lostorfer upon his discovery, which would make an epoch in syphilodology. He remarked that it was unfortunate that we had no prizes to distribute, but that in Paris Dr. L.'s labors would certainly be crowned with a prize.

Prof. Stricker confirmed the statements of the speaker, and related the details of the manner in which the specimens of blood were delivered to Dr. Lostorfer, and how he from them designated those which had been taken from syphilitic patients. He had added some of his own blood to the number of the test preparations, in order to have absolute proof that it was not syphilitic.

Prof. Hebra also confirms the favorable and surprising results of the test examinations. Kohn had also later seen the same objects in syphilitic blood. It was remarkable that Dr. Lostorfer recognized Stricker's blood among the numerous preparations. He had expressed himself that "this specimen was Stricker's blood; it contained so many dirty elements." There must be, therefore, certain peculiar characteristics which pertain to the blood of non-syphilitic subjects also, and by which other dyscrasiæ are to be recognized. He had been led by this thought to conceive the idea of having the blood of small-pox patients examined in the same manner, in order to discover if some specific diagnostic signs could not be discovered.

Diabetes in India.—The subjoined interesting article on diabetes occurs as an editorial in the *Indian Medical Gazette*, Calcutta, December 1st, 1871:—

It seems strange, considering the frequency with which diabetes is met with among the natives of this part of India, that so little should be known of its circumstances. In Dr. Gouverneur M. Smith's latest and most valuable communication to the New York Medical Society (should be New York Academy of Medicine), he remarks that, so slight is his knowledge with reference to the disease in India, that he can hardly determine if it even exists among the natives of the country. In New York, during the year 1868, the ratio of deaths from diabetes to the population was 1 in 100,000. We are certainly not in a position to give any figures on this point, but our impression is that among the upper and middle classes of natives in Calcutta, almost every family has lost one or more of its members from diabetes. We can at any rate assert with confidence that the disease is frequently met with among the classes referred to, but as yet we are absolutely ignorant of all that concerns its history from a medical point of view, and we look to the native medical practitioners of the place to enlighten us on the subject; many of them must have had very considerable experience in cases of diabetes, and we should very much like to get their opinions on several points connected with the clinical study of this formidable disease.

We might, in the first place, seek for information regarding any cases in which diabetes appears to have been an hereditary disease. A very remarkable instance of this kind has, for example, been placed at our disposal by Baboo Satcory Dutt, and has reference to one of the most highly respectable and influential families in Calcutta.

No. 1, Baboo B—, died at the age of 65, of acute diabetes, which lasted only twenty days.

No. 2, the eldest son of No. 1, died of chronic diabetes.

No. 3, the third son of No. 1, had chronic diabetes.

No. 4, the fourth son of No. 1, died of acute diabetes.

No. 5, a daughter of No. 1, now aged 65, has diabetes.

No. 6, the eldest son of No. 2, grandson of No. 1, died of chronic diabetes.

No. 7, the second son of No. 2, has diabetes.

No. 8, the eldest son of No. 4, has diabetes.

In addition to the above, two widows of the family, wives of No. 3, died of diabetes.

This is certainly a very remarkable case, for, as Dr. G. M. Smith writes, there are very few reliable data in relation to the hereditary transmissibility of diabetes. There can be no possible doubt as to the above facts, and it is just such an example of that kind of information we are much in want of.

Then, again, with reference to the relative frequency of the disease among males and females, Dr. G. M. Smith arrives at the conclusion that it is equally common among members of both sexes. We were inclined to think diabetes far more frequent among males than females in this country. The case above stated, however, rather points to the correctness of Dr. Smith's opinions. Any facts bearing on this point would be most interesting in a clinical point of view, as bearing upon the etiology of the disease.

We should be very glad to draw forth information from our native friends, as to the influence of diet on diabetes. Are the members of those sections of society who do not abstain from animal food more subject to the disease than those who rigidly confine themselves, from childhood to old age, to amylaceous and saccharine food? This is a question which is of the greatest interest, bearing as it does directly on the circumstances of the disease, and the various theories that have been advanced to account for it. The field of observation open to practitioners in this country is absolutely unique in this respect, and can hardly have failed to attract the notice of some of our professional brethren. The mortuary statistics of the native army and jails might very possibly afford information to those who have time and inclination to advance our knowledge regarding diabetes in India.

Abscess of the Septum Narium.—Dr. D. H. Goodwillie, of New York, reports the following:—Mrs. ——, aged 66 years, presented herself some time in October, 1867, with an abscess of the septum narium, filling up both nostrils. This was the result of an injury from running against an open door in the dark. The swelling was shining, red, tender on pressure, with fluctuation. Inflammation extended to frontal sinuses, as she complained of severe headache. Opened freely on both sides with a lancet, and found the abscesses communicated through the septum. Dressed by introducing the point of a small syringe into the wound on one side and washing out the cavity, the fluid passing out by the other side. A tent was introduced by means of a curved needle through the opening in the septum, the ends of which passed out of each wound. Tent removed on third day, and the wounds soon healed.

Sulphite of Soda in Variola.—Dr. Maurice Pflaum, of Pittsburgh, Pa., comes to the conclusion that sulphite of soda, given at any time before the eruption has fully come out, will invariably cut short the disease, even more effectually than quinine does intermittent fever.

Yellow Fever—its Pathology and Treatment.—Benj. S. Purse, M.D., of Savannah, Ga., writes:—I was led to the consideration of this disease in the early part of the past summer, by the fact of its prevalence in the city of Charleston, S. C. I then arrived at the following conclusions as to its pathology and treatment, and determined to test their truth upon the first opportunity:—Yellow fever is never endemic nor epidemic except in localities in which malarial fever is endemic. These two fevers resemble each other very much in their symptomatology, and at times the diagnosis between them is impossible. This resemblance is increased by the fact that the functions of the liver are markedly disordered in both diseases. Owing to these facts, even at this late date, there are physicians who believe that yellow fever is but an aggravated type of malarial fever. But they are essentially distinct diseases, originating from *two* specific poisons.

The malarial poison acts primarily upon the sympathetic nerve centres, and through them deranges the functions of all the organs sustained by that system of nerves, and is the only true "*nervous* fever." The yellow-fever poison acts directly upon the cell-structure of the liver, tending to produce molecular death of that organ. When the function of the liver is entirely suppressed, that organ becomes a mechanical impediment to the circulation, and as effectively so as a ligature around the portal vein would; because the portal circulation is continuous with the systemic circulation, through the medium of the capillaries, and the capillary circulation is controlled by the cell-structure which they supply. When the cells cease to perform their function, their capillary circulation also ceases. The suppression of the function of the liver in this disease, as a rule, is gradual, and is the result of the progressive death of the cells. In some cases, however, the liver is killed, as it were, by a blow, and the

patient dies before those changes in its structure, so characteristic of this disease, have been developed.

It is a general law of the body, that when any organ has served its purpose, its cells undergo fatty degeneration and are absorbed, leaving its connective tissue to mark its former site.

This normal degeneration and absorption of organs is caused by the failure of their cerebro-spinal nerves, which control their blood supply; while their sympathetic nervous influence being unimpaired, they do not suppurate, but degenerate into a fatty condition. The cells dying from inanition, the yellow-fever poison produces this condition of the cells in the liver, but in a different manner. In the former case the supply of blood ceases, while in the latter the *cells* are paralyzed. Carbonic oxide causes a similar paralysis of the blood-corpuscles. When the circulation through the liver ceases, the portal vein and all the veins emptying into that vein become congested, until filled to their utmost capacity. The capillaries connecting these veins with the arteries, being unable to relieve themselves of the *vis à tergo*, receive the full force of the heart's action, which soon overcomes the comparatively slight resistance offered by their simple attenuated walls; and capillary hemorrhages take place from the mucous surfaces of the organs which supply the portal blood. Each drop of blood, as it falls into the stomach and intestines, is coagulated by the acid secretions there met with, producing the material which is known as "Black Vomit" and "Black Vomit Stools."

Disorders of the liver always give rise to frontal headache, and the pain is in proportion to the acuteness and severity of the liver disease. In agreement with this rule, yellow fever is characterized by a peculiarly intense frontal headache. The albuminuria is caused by the liver disease. All cases of albuminuria which are not caused by disease of the kidneys *per se*, late pathologists generally agree in ascribing to some as yet not definitely ascertained disorder of the liver. My opinion is, that it is caused by a gradual degeneration of the cells of the liver. An analogous disease is described by Dr. Flint, Sr., which he calls "Degeneration of the Gastric Tubules." It is a demonstrated fact that the albuminous principles of the blood are converted, by their passage through the liver, into the saccharine principles, which in their turn are decomposed in the pulmonary circulation. When either of these organs fails, the excess of albumen or sugar, as the case may be, is excreted by the kidneys. The albumen, generally, does not appear in the urine until about the third day. The pulse, as a rule, does not exceed one hundred, and is full and hard, indicating plethora of the blood-vessels.

This plethoric condition is the result of the two following causes: 1st. By the inaction of the liver, the volume of the blood is not reduced by the conversion of its albuminous principles into the substances which are excreted by the lungs, kidneys, and skin. 2d. While the excretions are lessened or entirely suppressed, the lymphatic or albumen producing organs continue comparatively active. These two causes co-operating, produce a fulness of the systemic circulation, notwithstanding the excessive congestion of the portal circulation.

I suggest the following treatment, believing that if it be commenced with early in the disease, it will exercise an almost specific influence. As soon as the patient is seen, without regard to the stage of the disease, apply a large warm poultice to the epigastrium, repeating from time to time if necessary. Fifteen minutes after the application of the poultice, administer one teaspoonful of each of the following solutions, in an ounce of water. Repeat the same dose every hour until cinchonism is produced.

℞. Potass brom..... ʒ i.
Aqua..... ʒ iv.
M. Sig.: Teaspoonful every hour.

℞. Quinia sulph.. ..... ʒ i.
Arom. sulph. acid.....f. ʒ ij.
Tr. opii camph.,
Aqua.....āā f. ʒ i.
M. Sig.: Teaspoonful every hour.

When cinchonism is present, continue the bromide potassium alone every hour, giving only an occasional dose of the quinia solution. If necessary, relieve the bowels by the Seidlitz or other saline, or by enemata.

The above combination of quinia, arom. sulph. acid, and tr. opii camph. has *never failed*, in my experience, to stop the nausea and vomiting so common in malarial fevers. I have repeatedly used it with patients suffering with high bilious fever, whose stomachs were so irritable that upon the least attempt to swallow even cracked ice, produced violent retching and vomiting, and in several instances a slight hemorrhage from the stomach, who were immediately relieved by the *first* dose of the remedy. It is one of the surest, quickest, and most powerful diaphoretics, the third or fourth dose usually causing a profuse perspiration. I have frequently subdued in twelve hours severe bilious fevers of three and four days' duration with it alone.

This combination meets three of the indications in the treatment of yellow fever, viz.:

1st. It relieves the nausea and vomiting. 2d. It produces a powerful action of the skin. 3d. It is a direct tonic to the liver, the quinia having a specific effect upon the sympathetic nerve.

Bromide of potassium is almost specific in albuminuria. It almost uniformly produces absorption of dropsical effusions, irrespective of their cause, and without sensibly increasing the secretions unless they have been suppressed. It relieves congestions in every part of the body, particularly of the brain. It is *the remedy* in congestive and nervous headaches. It is a powerful sedative to the brain and spinal axis. It produces a sedative action on mucous membranes. It will relieve suppression of the urine. Possessing these therapeutic properties, bromide of potassium meets the other two indications in the treatment of yellow fever, viz.: 1st. The intense frontal headache. 2d. The albuminuria which is always developed in grave cases. For the albuminous feature in this disease, I give the bromide upon the theory that, as it is curative of albuminuria, by administering it in anticipation of this grave symptom we prevent its development. If this were not sufficient reason for its early use, we have still another, to relieve the head symptoms.

Rachitis.—Dr. John S. Parry, Accoucheur of the Philadelphia Hospital (*Am. Jour. Med. Sciences*) says that this affection is not confined to children who are inmates of hospitals; moreover, it is not among the poor alone that it is met with, notwithstanding Meigs and Pepper cannot corroborate the experience of Jenner, who has "very often seen it among the children of the wealthy."

He has been irresistibly forced to the conclusion that this disease is scarcely less frequent in Philadelphia than it is in the large cities of Great Britain and the Continent of Europe, and that it should occupy just as important a place in our mortuary lists as Hillier conceives that it should in those of the Registrar-General of England. It is probably true that the disease is rarely congenital, but to say that "it is never born with

the children" (Boerhaave's 1487th aphorism), he believes all will have to admit is going too far. In view of recorded facts, rachitis is sometimes, though rarely, congenital, and may result in considerable deformity even before birth. It is not by any means rare during the early months of extra-uterine life. The writer has met with unequivocal bending of the ribs at six weeks after birth. It is rare for it to begin after the end of the first year. He has seldom met with it in a child in whom no symptoms of the affection presented themselves before this time. A common source of error is the failure in discriminating between rachitis and mollities ossium. Bromfield, Stanley, Beylard, and Stewart have committed this error. Rachitis is probably more than any other a disease of childhood, and even of infancy, while mollities ossium is an affection of adult life.

Aconite Poisoning.—Dr. Stephen S. Keene, Providence, R. I. (*Boston Med. and Surg. Journal*), publishes a case of poisoning by the *external application* of aconite. For pain in right side of the face, he applied a portion of the following mixture to the affected part by rubbing with the fingers. ℞. Tinct. rad. aconiti, Tinct. opii, ā ā ℥ ss. M. One half hour afterwards he was seized with dizziness, nausea, dimness of sight, cephalalgia, pain in back, with sensation of coldness running along the spine, etc. One hour after the application, the usual results from an overdose of aconite internally were exhibited. On examination, no abrasions were discovered on face, but the index finger of right hand had a slight wound. The patient, male, aged forty-five, of good constitution, was treated with ammonia and chloroform, and at the end of forty-eight hours the symptoms subsided.

Cathartics in Albuminuria—Dr. Moore, of Rochester, N. Y. (*Med. and Surg. Reporter*), read a paper before the Central New York Medical Society, in which the idea was enforced that albuminuria might remain as an organic disease for a considerable length of time; and during that time there was a remedy in sulphate of magnesia. A case was presented, in which the condition of albuminuria was removed by the cathartic treatment.

Drs. Benedict and Campbell gave histories of cases which had been managed according to Dr. Moore's plan, which afforded relief.

In answer to Dr. Mowris, whether the saline treatment had been successful after scarlet fever, Dr. Moore replied affirmatively.

Large Pleuritic Effusion Treated by Thirst.—A case in which this mode of treatment was pursued by Dr. Moxon, in Guy's Hospital, is reported in the *Medical Times and Gazette* of January 6th. At the commencement of the treatment the right pleural cavity were filled with liquid. The drinks of the patient were limited to ten fluid ounces per diem, and five grains each of iodide of potassium and muriate of ammonia were given three times daily. By the middle of the third week of treatment dulness on the affected side had disappeared.

Presence of Bacteria in the Blood during Erysipelas.—Dr. Nepveau reports, in the *Gazette Médicale de Paris*, four observations, made with a No. 9 immersion of Hartnack's make, on blood taken from patients suffering with this disease, and says:—

1. Bacteria exist in considerable numbers in blood drawn by puncture from a surface affected with erysipelas; three to five, and sometimes as many as seven, having been at one time in the field of the microscope.

2. Bacteria exist as well in blood drawn from other portions of the body than those affected with erysipelatous inflammation; they are not so numerous as in blood drawn from the diseased surface, but can almost always be found in any drop of blood submitted to examination.

3. In all the cases examined the *bacterium punctum* of Ehrenberg was the one observed.

4. They appear to be present in cases of so-called idiopathic as well as in those of traumatic erysipelas; but it remains to be established whether or not this is constantly the fact.

Xylol is the name of a new hydrocarbon lately introduced to the materia medica in Germany. When pure it is colorless and has a faint odor, somewhat like benzole. Its specific gravity is 866, and its boiling point 139° C. Xylol, or xylene ($C_8 H_{10}$), was first separated from coal naphtha by Dr. Hugo Müller, and is obtained by fractional distillation until a distillate is obtained of about 140° C. boiling-point; this is mixed with sulphuric acid, which dissolves xylol, forming xylol-sulphuric acid, which is decomposed by dry distillation, and the xylol thus obtained is further purified to render its use safe. Its specific action is not, as yet, very well understood; but it has been administered in small-pox with such really good results that it bids fair to be an important remedy. Dr. Zuelzer, Senior Physician at the Charity Hospital, Berlin, has used it with "complete success" in the above affection. It is given in capsules, in doses of from 3 to 5 drops for children, and 10 to 15 for adults, as often as every one, two, or three hours. As much as a teaspoonful has been taken at one time without injurious effects.—*The Pharmaceutical Journal.*

Effects of Various Liquors on the Kidneys and Bladder.—Kraus, of Vienna, says, speaking of this subject: "Sparkling wines are very injurious in diseases of these organs, but not on account of their carbonic acid, which assists materially in the elimination of the phosphates. Champagne not only increases the secretions, but, in an extraordinary manner, the phosphates; and the conduct of medical men who advise its use in cases of calculus cases is very reprehensible. His experience absolutely contradicts the idea of the solvent action of carbonic acid in concretions already formed. Old beer he considers unobjectionable; but new beer is to be avoided, because the fermenting principle enters the mucous membrane, and gives origin to a greater or less degree of catarrh. English pale-ale is open to the same objection on account of its richness in alcohol and carbonic acid; porter, however, if of good quality and age, he considers to be also unobjectionable.

On the Diagnosis and Treatment of Scrofulous Anginæ.—Dr. E. Isambert, of Paris, writing in *The Practitioner* of these affections, calls attention to the limited space devoted to this subject in works on pathology, and the fact that their distinctive characteristics are not well appreciated; being frequently confounded with those of syphilitic, tuberculous, or malignant degenerations of the pharynx and larynx. It is, he says, before all chronic affections, the almost indolent, and is seldom attended with hypertrophy of the cervical glands. Strumous catarrhal angina has no very well-defined character; the follicülitis and the amygdalitis with which it is accompanied being distinguishable from analogous affections only by considering the general habit and constitution of the patient. Scrofulous ulcerations of the pharynx constitute, on the contrary, a pathological type which may be recognized. They are to be met

with, according to their order of frequency: first, on the posterior surface of the pharynx; next, on the soft palate and its arches; seldom on the tonsils, on the palatal portion of the pharynx, and towards the Eustachian tube; lastly, towards the epiglottis, the arytenoid eminences, and the laryngeal infundibulum. They are almost indolent, and are not attended, in the great majority of cases, by inflammation of the cervical glands. This localization at the outset, the absence of all inflammatory and painful phenomena, and of any extension in the direction of the cervical glands, serve to distinguish them clearly enough from syphilitic ulcerations, which make their first appearance on the soft palate, are surrounded by a more extensive circle of inflammation, and are attended by greater pain and by inflammation of the cervical glands.

The appearance of the scrofulous ulcers is pretty similar to that of the slightly eroded syphilitic patches; but they do not present opaline or iridescent aspects, which in the mucous syphilitic patches form a marked contrast with the carmine color of the inflamed circle. The ulcerated patch of scrofula, though irregular and sinuous like that of syphilis, is more pallid and of a yellowish color, like that of subcutaneous areolar tissue. It is but slightly depressed, and presents a rugged surface, more or less covered with small eminences. It is surrounded by an inflammatory circle of small extent and slight thickness, not at all loosened, and blending in an insensible manner with the ulcerated surface. This border speedily resumes its normal aspect under the influence of local treatment. Whilst the syphilitic patches of the pharynx are well enough defined, and are bathed by abundant and limpid saliva, scrofulous ulcerations are covered by a very viscid and adherent muco-purulent or whitish pultaceous secretion. In the graver cases we may observe on the pharynx a dirty or earthy-gray coating, which covers all the surface and gives origin to a more or less offensive smell; and yellowish, acuminated pimples, like small furuncles. These strumous manifestations may make their appearance without being preceded by other scrofulous phenomena in the neighborhood.

However, the deformities and morbid adhesions of the soft palate and its arches, which are sometimes observed on the first examination of the patient, would show that previous outbreaks of the disease had taken place.

The iodo-mercurial treatment modifies pharyngeal syphilitic manifestations in a very short time when they are not too inveterate. The same mode of treatment makes scrofulous ulcerations worse, and if after a few days of this treatment the symptoms of a case of pharyngeal ulceration are not improved, a tonic and anti-scrofulous treatment should be resorted to.

When combated in time, and before the production of serious injuries to the pharynx, scrofulous ulcerations are easily cured. At the outset, amendment takes place rapidly; but the ulcers, after such changes, close very slowly, much more slowly, indeed, than syphilitic ulcers. They are then superseded by white cicatrices of a pearly aspect, set in small clusters, sometimes parallel to each other, and at other times radiating in all directions. As to the adhesions of the soft palate, it is only by the resort to surgical measures that we can hope to modify them.

Deafness supervening upon obliteration of the Eustachian tube seems to be beyond the reach of the resources of our art.

The previous history of the patient, and any concomitant phenomena, will be of great aid in forming a diagnosis.

Lupus of the face, or of the nasal fossæ, will generally have preceded pharyngeal lupus.

It is only when phthisis is far advanced, and pulmonary cavities exist, that we observe ulcerations of the posterior surface of the pharynx, and even then the ulcers are small and quite superficial.

Neither herpetism, arthritism, nor catarrhal anginæ can produce ulcers which we should be liable to confound with pharyngeal scrofula. It is hardly necessary to refer to pharyngo-laryngeal diphtheritis, whose course and pathological products are too special and well known to involve the diagnosis.

Scrofulous lesions present none of the neoplasms peculiar to cancer, the offensive smell of the latter aiding, also, in the formation of a diagnosis.

The treatment may be briefly summed up as follows:—

Absence from mercurial remedies; or, where there exists a positive mixture of syphilis and scrofula, a careful employment of that treatment, alternating with considerable periods of rest, during which the iodide of potassium or of iron may be employed. Second, speedy employment of the general treatment of scrofula: cod-liver oil in large doses, iodide of iron, cinchona, wine, good food, out-of-door exercise, and sulphurous baths. Third, persevering employment of local treatment by means of the laryngeal sponge, tincture of iron, either pure or mixed with opium. The ethereal tincture of iodoform, chloride of zinc, or concentrated chromic acid, may be applied to the diseased surface.

Chromic acid is admirably borne by the mucous membrane of the mouth, pharynx, and even the larynx, exerting a highly powerful action in œdema of the glottis, strongly astringing the membrane, and thus warding off the need for tracheotomy.

Perchloride of iron has been employed, especially in cases of bleeding ulcers.

Nitrate of silver does not seem to be of much benefit, unless when applied with the object of hastening the cicatrization when already in good progress.

Various powders may be blown upon the surface, especially iodoform mixed with lycopodium.

Local douches made with the irrigator may be very useful, and exert an anodyne action in certain cases.

In respect to atomized fluids, he considers their effects to be inefficient in such grave lesions.

The most important part of all is to form, as early as possible, a correct diagnosis, so as to institute a rational treatment, and avoid hesitation, loss of time, and, above all, weakening measures which are absolutely contra-indicated.

Chloride in Place of Bromide of Potassium.—Dr. Lander has substituted the chloride for the bromide of potassium in the treatment of epileptics, with a success which he declares to be identical. He begins with smaller doses; but doses of 75 to 150 grains daily have been borne without inconvenience for months in succession. He thinks that it is more active, says that it is one-sixth the price, and not followed by the unpleasant effects of the bromide. He advances the theory that the latter is converted in the stomach into the chloride, and that, for many reasons, it is desirable to administer it at once in this form.

Compressed Air as a Remedial Agent.—G. von Liebig (*Archiv f. Klin. Med.*) seeks to determine, with a view to the therapeutics of chronic lung diseases, what influence is exerted on the respiration by increased or diminished atmospheric pressure. Respiration at high altitudes, with low barometric pressure, as is well known, is exceedingly difficult. This is due to the greater elastic recoil of the lung tissue from diminished atmospheric counter-pressure. Hence the difficulty of inspira-

tion and the disturbance of circulation. Under increased barometric pressure, the phenomena are quite the reverse; respiration is usually deep and easy, and the pulse becomes slower. The influence of increased or diminished pressure is not of momentary duration, but persists for some time. Residence at high altitudes has, therefore, a tendency to develop the respiratory power, and strength generally. From the influence of diminished atmospheric pressure on the lungs, the advantages of residence at high altitudes in cases of emphysema will be apparent. Emphysematous lungs, having lost their elasticity, and offering less resistance to the pulmonic circulation, may regain their tone, and respiration become easier. In all cases of diminished elasticity of tissue from any cause, residence at high altitudes under low barometric pressure is advisable.

Distance of the Macula Lutea from the Optic Disc.—In a recent number of the *Centralblatt*, Dr. Ed. Londolt, of Zurich, states that, from careful measurements made by him in upwards of 100 eyes, he has ascertained that in healthy, or emmetropic eyes, the distance of the macula lutea from the centre of the optic papilla, in a horizontal direction, is 3.915 millimetres; the former, also, being 0.785 of a millimetre higher vertically. The distance is always greater in hypermetropic, and less in myopic eyes than is represented by these figures.

Digitalis an Anaphrodisiac.—M. Gourvat, in the course of a paper published in the *Gaz. Méd. de Paris*, on the action of digitalis, says: "When digitalis, or digitaline, is administered for some time to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor seminis diminishes, and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa. With women, digitalis or digitaline excites strong, regular, and intermittent uterine contractions, and controls metrorrhagia; hence digitalis is employed in producing abortions. (Tardieu.) It is probable that this drug acts as an anaphrodisiac in women, inducing, by long-continued use, impotence and sterility, appearing also, in their cases, to interfere with the development of the Graafian vesicles; the propagation of species being thus doubly retarded.

Frequency of Laryngeal Ulcerations in Syphilis is the subject of a valuable article in the *Wiener Med. Press*, from which the following figures are taken:—Out of 100 post-mortem examinations of patients affected with secondary syphilis, performed at Prague, Kühle saw ulcerations of the larynx 15 times; whilst Altenhofer met only 25 cases among 1,200 living patients. Gerhardt and Roth, on the other hand, found it 18 times in 54 syphilitic patients—viz., 11 times with 44 secondary patients, and 7 times with 12 tertiary ones. Out of 1,000 syphilitic patients, Lewin found 44 presenting an affection of the larynx and more or less hoarseness. Engelsted counted 25 laryngeal cases among 521 patients suffering from syphilis—viz., 14 cases among 292 men, and 11 cases in 292 women. Doctor Sommerbrodt (the writer of the article) himself collected cases for nine months at the Allerheiligen Hospital; and, out of 84 patients with constitutional syphilis, 15 presented ulcerations of the larynx in different periods, and 14 had catarrhal affections with hypertrophy of the mucous membrane. These lesions seem, therefore, rather frequent, as already stated by Türck in his manual. Among 238 cases of persons suffering from various laryngeal affections, says the author, 45 were syphilitic. Laryngeal syphilitic symptoms may occur in all the stages of the disease. Türck observed them in a patient who had had primary lesions thirty years before; and Frankel has seen such ulcerations in a child two months old, with whom the first signs of syphilis had appeared one month after birth. The earliest time after primary lesions has, in Türck's experience, been six months; in Sommerbrodt's, five months; and in Lewin's, from two to three months. The seat of the lesions is indicated in the following table in 92 cases:—

Epiglottis		21	times.
True vocal cords	both.....17	34	"
	right..... 4		
	left.....13		
False vocal cords	both 2	5	"
	right..... 0		
	left..... 3		
Interior of larynx	Superiorly 9	19	"
	Anteriorly 10		
Aryteno-epiglottic folds		6	"
Upper opening		2	"
Right pyriform sinus		1	"
Lower portion of the larynx		4	"

It will therefore be seen that the vocal cords are the parts most frequently attacked, especially the *left*. This circumstance should be recollected, as, in Rhimer's experience, tubercular ulcers are mostly situated in the *right*, and this peculiarity has a diagnostic value. It is, in fact, towards the upper part of the larynx that the syphilitic ulcerations are formed.

Strychnia a Retinal and Optic Nerve Stimulus.—Dr. Julian J. Chisolm, Clinical Prof. of Eye and Ear Diseases in the Univ. of Maryland (*Am. Journal of Med. Sciences*), advocates the hypodermic use of strychnia in cases of optic nerve atrophy, and reports cases in which the effects seemed nearly instantaneous upon the injection of the fluid under the skin. In nearly every instance the patient experienced the brightening of the light in less than a half minute. Prof. Nagel, of Tübingen, Germany, injects, in his cases, the temple, near the seat of the eye disease. As the strychnia has first to be absorbed, and only acts upon the nerve centres through the circulation, he sees no advantage in this location over the arm, and hence uses this distant but more convenient portion of the body. He commences usually with the one-sixtieth of a grain, which is gradually increased to one-thirtieth, twice a day, in no case exceeding this last amount. This treatment has been tried in many cases, doing harm to none, and benefiting all more or less. In functional disturbances the relief is prompt; in organic troubles of the retina and optic nerve results show themselves more slowly. So far, his experience in the hypodermic use of strychnia enables him to indorse the statement of the wonderful effects secured by Prof. Nagel, of Tübingen, and he can recommend to the profession strychnia, hypodermically used, as a most valuable remedy in many cases of nerve-blindness.

Amputation at the Knee-joint.—Two successful cases of this amputation are recorded by Dr. G. M. Staples, Dubuque, Iowa (*Am. Journ. Med. Sciences*). In regard to the length of the anterior flap, he states that the incision extended but a trifle more than an inch below the tubercle, and, as is seen, the cicatrices remain in the hollow behind the condyles, with non-retraction of the patella. If it is a matter of some importance to retain the patella at the end of the stump, he asks, may not as short an anterior flap as is practicable and safe, with flexion of the thigh upon the pelvis until union is effected, contribute to this result?

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 22, 1872.

Dr. Abraham Jacobi, President, in the Chair.

The following physicians were reported from the Comitia Minora as recommended for membership, and, by vote of the Society, they were admitted, viz.: Alexander Perry, Charles M. Fairbrother, Nicholas L. Campbell, Julius H. Tyndale, Gustavus Treskatis, Herman Loewenthal, and L. De Forrest Woodruff.

The President announced the death of Dr. Henry D. Bulkley and of Dr. Alexander N. Gunn. On motion, Drs. D. C. Carr, D. A. Hedges, and S. W. Roof were appointed a committee to draft appropriate resolutions in the case of Dr. Gunn. Resolutions on Dr. Bulkley's death had been adopted at the Special Meeting which we have already recorded.

DISEASES OF THE PAST YEAR.

The report of the Committee on Diseases was read by its chairman, as follows:—

The Committee on Diseases has the honor to present the following report upon the mortality and prevailing diseases of the past year:

The total mortality of this city for 1871 amounted to 26,976—a decrease of 199 from the previous year. It was equivalent to a death-rate of 28.6 in each thousand inhabitants.

Zymotic diseases destroyed in the aggregate 8,365 lives—being 31 per cent. of the total mortality—a slight increase upon 1870. The most prominent epidemic of the year was that of small-pox. This disease had prevailed to an unusual extent in 1870, having produced 293 deaths, but it had so subsided in the autumn of that year, that in the three months ending December 31st, 1870, it occasioned but 12 deaths. In the early part of January, 1871, it broke out afresh with extraordinary vigor, and rapidly increased during the ensuing six months. It caused 208 deaths in the first quarter of the year, and 304 in the second quarter. In the summer it began slowly to decline, its mortality being 164 for the quarter, and but 23 for the month of September. Up to that time the work of vaccination had been so energetically pursued by the vaccinating corps of the Health Department, that they had vaccinated 100,000 persons in nine months. At the very time, however, when the prospect was most favorable for entirely arresting the disease, the Board of Health was obliged, on account of the failure of its pecuniary resources, to dispense with its extra inspectors for some two months. The result was soon apparent in the extension of the epidemic, as, although only 23 deaths were due to small-pox in October, it occasioned 36 in November, and 70 in December. On November 24th the work of vaccination was resumed, but the disease had acquired too much new force to be readily overcome. Its total mortality for the year amounted to 805, its greatest yearly mortality recorded in this city during the present century, the next largest number of deaths, 681, having occurred in 1853. During the year 2,035 cases were reported to the Bureau of Sanitary Inspection. According to these figures its mortality reached 39 per cent. About 47 per cent. of the deaths were among children of 5 years old or less. The greatest number of deaths according to locality were as follows: 17th Ward, 41; 22d Ward, 37; 20th Ward, 26; 21st Ward, 23. The Small-Pox Hospital furnished 572. Its severity here during the past year, although remarkable for New York, was insignificant as compared with its ravages in many other places throughout the world. We may simply mention, for example, among foreign cities the Hague and London. In the former (whose inhabitants have always evinced a peculiar antipathy towards vaccination) the mortality from small-pox during the first quarter of 1871 was enormous, reaching the extraordinary annual death rate of 48 in the thousand inhabitants—a rate which would have produced in New York 7,500 deaths from small-pox in three months. In London there were registered during the year 7,876 deaths from small-pox in a total from all causes of 80,332. In a single week the fatal cases amounted to 288. The same death-rate here would have given us 2,300 deaths instead of 805. The most remarkable epidemic of small-pox upon this side of the Atlantic has devastated the city of Philadelphia. Nearly 2,000 fatal cases were registered during the past year, of which 1,812 occurred in the three months ending December 31st. 233 were recorded in a single week.

The next zymotic disease which displayed an unusual activity here during the past year was whooping-cough. It carried off 465 victims, being the greatest number of lives destroyed by this disease in any year of the present century, the next largest number having been 377 in 1855. Of the 465 deaths, 196 were males and 269 females. The large preponderance of females over males is curious, but, as the death records of former years show, is quite characteristic of this affection. As far as we are aware it is unaccountable.

Remittent fever during the year caused 165 deaths; intermittent, 110; and typho-malarial, 12. These fevers were never so fatal before. They prevailed most extensively in the upper wards of the city.

There is little of interest to record in regard to the other zymotic affections. The following statement presents the mortality of the principal ones for the years 1870 and 1871:

	1870.	1871.
Scarlatina	975	791
Measles	298	409
Diphtheria and croup	729	704
Typhus fever	96	65
Typhoid fever	422	239
Diarrhœal diseases	3,956	3,653

The principal feature of the above statement is a considerable falling off during 1871 in the mortality from typhus and typhoid fevers and diarrhœal complaints. 6 deaths were ascribed to cholera; 6 to relapsing fever; 2 to yellow fever; 142 to syphilis; 7 to hydrophobia, and 220 to intemperance. Typhus and typhoid fevers were most prevalent and fatal in the 17th Ward.

The following cases of contagious disease were reported to the Bureau of Sanitary Inspection during the year:

Typhus fever, 126; typhoid fever, 492; scarlatina, 2,850; relapsing fever, 80; measles, 1,626; diphtheria, 408; small-pox, 2,085.

Constitutional diseases produced 6,263 deaths, about 23 per cent. of the whole, against 6,329 in 1870. Of these rheumatism caused 103; cancer, 339; marasmus and scrofula, 757; hydrocephalus and tubercular meningitis, 755; and phthisis pulmonalis, 4,186. The mortality from phthisis was equivalent to 15½ per cent. of the total, and was both positively and relatively large as compared with that of late years. In 1866 it

was equal to 12.2 per cent.; in 1867 to 14.4; in 1868 to 13.7; in 1869 to 13.3; in 1870 to 14.8; and in 1871 to 15.5. We thus perceive that this formidable disease has been constantly increasing in fatality during the past six years. About one-quarter of its deaths took place in hospitals, and a large majority among the tenement-house population. The migratory character of that class of our inhabitants renders it almost impossible to observe and localize those regional causes which may influence consumption in this city.

Local diseases, or affections of special organs, occasioned 9,282 deaths; 34 per cent. of the whole, a decrease of 617 from the previous year. Of these there were due to diseases of the nervous system, 2,677 deaths; circulatory system, 894; respiratory system, 3,248; digestive system, 1,052; urinary system, 1,163; generative system, 54; locomotory and osseous system, 120; and integumentary, 74. Among these there was little worthy of extended mention. There were 964 deaths from bronchitis, and 1,834 from pneumonia, against 855 and 1,836 respectively in the preceding year. Urinary diseases were uncommonly fatal, and they appear to have been becoming more and more so during the past few years. Thus the deaths by Bright's disease within four years have been as follows, commencing with 1868: 534; 557; 787, and 947—an increase of 77 per cent. during the period mentioned.

Developmental diseases (or those arising from abnormal action of the formative, reproductive, or nutritive processes) produced 1,763 deaths, or 6¼ per cent. of the whole. 888 were in infants newly born; 312 in women; 333 were due to senile decay; and 230 to atrophy and asthenia. These figures were somewhat in excess over the previous year.

Finally, the deaths from violent causes amounted to 1,303, or 5 per cent. of the whole, against 1,000 in the previous year. The increase was owing principally to the July riot, which caused 53 deaths, and the Westfield explosion, 82. 1,070 deaths were ascribed to accident and negligence; 65 to homicide; 114 to suicide; and one was a judicial execution.

Of the total number of deaths, 7,994 occurred among infants less than one year old; 10,700 among those less than two years old; and 12,970 among children less than five years old; the last being 40 per cent. of the total mortality. In 1870, the deaths among such children were equal to 49 per cent. of the whole; in 1869 to 51 per cent.; in 1868 to 52¼ per cent.; and in 1867 to 53 per cent. Altogether, therefore, between 1867 and 1871, there has been a gain among children less than 5 years old of 13 per cent. upon the total mortality. There were 1,296 deaths among persons 70 years old and upwards, a gain of 74 upon the previous year. 14 were reputed to have been 100 years old or more, of whom 3 were males and 11 females.

Respectfully submitted,

CHAS. P. RUSSEL, M.D.,
Chairman Com. on Diseases.

CANTHOPLASTY IN CONJUNCTIVAL AND CORNEAL AFFECTIONS.

DR. H. ALTHOF read a paper entitled *Clinical Notes on Diseases of Conjunctiva and Cornea.* Its main object was to call attention to an important element, hitherto rather neglected in the therapeutics of these affections, viz.: the diminishing of the pressure of the lids upon the globe. After a review of the present methods of treating the more serious forms of conjunctival disorder —granular lids, diphtheria, blennorrhœa, etc.—all of them only partially under the control of the physician, Dr. A. entered more directly upon its special subject.

Thus far, three different procedures had been occasionally followed for the purpose of relieving the ball of the eye from excessive pressure, viz.: incisions or excisions of chemotic conjunctiva; removal of a triangular piece of skin (down to the muscle) from the upper lid; and splitting of the outer angle. This last method undoubtedly suited best, but its good effect was very transitory, the wound healing up in too short a time (a couple of hours) to give any permanent relief. If, therefore, a way could be found to modify this remedy so as to make its results lasting, the therapeutic means at our disposal would receive a valuable addition. This Dr. Althof thought to have been found in the little operation known under the name of *canthoplasty,*—the splitting of the external commissure down to the conjunctival sac, and careful uniting of the conjunctiva to the outer integument.

The results of this simple procedure had been very favorable, a large number of cases at present testifying to its efficiency. It had rapidly become popular in our great infirmaries, and was now, after five years' trial, considered by American oculists a very welcome remedy in cases which had baffled the most skilful efforts, and in diseases against which the prevailing treatment was almost powerless. Granular lids and phlyctenular conjunctivitis and keratitis furnished the great majority of cases in which canthoplasty might be employed with advantage—to cut off acute attacks, to diminish the number of relapses, or prevent them altogether, and to give other remedies a better chance for effecting a perfect cure. In genuine diphtheria the doctor thought it almost indispensable; and blennorrhœa in its most acute and destructive forms lost most of its dangers.

DR. H. D. NOYES agreed with Dr. Althof in his high estimate of the operation of canthoplasty. It had become as much a *sine quâ non* in the treatment of trachoma as had iridectomy in that of glaucoma and diseases of the iris.

The remarks upon diphtheritic conjunctivitis had especially interested him, from the fact that he had within three weeks had in his practice four cases of the affection, one them very severe, involving the ocular as well as the palpebral conjunctiva. Up to six months ago his experience had furnished him with but few examples of this disease. Since that time he had had perhaps a dozen; and he believed the occurrence of these cases in such close succession was coincident with an unusual prevalence of scarlet-fever and of croupous affections generally.

As to the therapeutics of conjunctival disorders, there was less need of discovering new means of treatment than of learning precision in the application of those now known; for their number was already bewildering.

DR. AGNEW'S experience had confirmed his belief in the bold use of canthoplasty. He had been led to modify the operation by division of the edge of the external tarsal ligament of the upper lid only, as exposed in the wound. It was the pressure of the tarsal cartilage of the upper lid which caused the chief trouble; and the incision of skin and mucous membrane alone would not always make such pressure harmless. He felt confident that since the introduction of iridectomy no other addition so important as canthoplasty had been made to the resources of ophthalmic therapeutics.

DR. EDWARD CURTIS could testify to the value of the procedure in phlyctenular conjunctivitis, the promptness of its effect seeming at times almost magical. He related a case, attended with great photophobia, cured by its means in a couple of days.

DR. R. H. DERBY thought the advantage of the ope-

ration lay, perhaps, as much in its enabling the surgeon to reach the retro-tarsal fold with his applications as in the relief from pressure it afforded. Von Graefe objected to its employment in diphtheritic conjunctivitis, from the danger that any wound in such a case might itself become the seat of diphtheritic deposit.

Dr. Althof had had only seventeen cases of diphtheritic conjunctivitis in five years, up to September last, though since then he had seen at least twenty. He would not set his own slight experience against Von Graefe's; but although he had always found the diphtheritic deposit infiltrating the incision, as it does wounds of other parts, yet he regarded this as of slight consequence, when compared with the great advantage conferred by the operation. By the time the diphtheritic trouble was cured, the wound was well healed, and no harm had come of it.

Dr. Roosa had never seen any grave consequences from the operation as performed by Dr. Althof, though he had several times seen ectropion of the lower lid follow, as a result, perhaps, of the incision having been made not horizontally outwards, but obliquely downwards. He had known, however, one or two instances of serious injury from the operation, where the dissection of the conjunctiva was made very thorough, and carried into the orbital tissue. In one case the eye was lost.

Four years ago he had had a dispensary case of phlyctenular keratitis, relieved most remarkably, in twelve hours, by the operation. He was not aware at the time that it had been previously performed for this form of disease.

Dr. Loring had been anticipated by the last speaker in most of what he was about to say. He had observed some half a dozen cases of ectropion due to the operation, and had several times seen trouble from too free a dissection of the parts. He thought the division of the external tarsal ligament, suggested by Dr. Agnew, should be limited to those cases in which trachoma had progressed to the extent of converting the inner surface of the lid into a hard, cicatricial tissue, which by its contraction had warped the tarsal cartilage, increasing its natural curvature, so as to bring its sharp edge against the cornea. He had himself formerly employed the method, originally proposed by Pagenstecher, of dissecting up the conjunctiva so as to make a considerable flap, the sides of which were so stitched to the skin near the outer extremity of the horizontal incision as to convert this into a wound, with its long diameter vertical. But this produced much greater deformity than the method followed by Dr. Althof; and moreover, as before remarked, the liberal incision into the orbit was by no means free from danger. He had seen two instances of severe inflammation from it, one of them being that referred to by Dr. Roosa, in which the eye was destroyed. He had therefore abandoned the plan in favor of the simple operation recommended in the paper. In this, as there stated, the stitch at the angle was the main point upon which success would depend.

Dr. Agnew did not mean to say that he would cut the tarsal ligament in every case, or that he would ever cut it in the lower lid. But he would incise it oftener than recommended by Dr. Loring, on account of the danger of relapse when this was omitted. Indeed, he had more than once been obliged to divide the ligament by a secondary operation, where the ordinary horizontal incision, previously made by another surgeon, had proved insufficient. There was no difficult dissection required, and no danger of orbital cellulitis. It usually sufficed to make the incision through the edge of the ligament, near its insertion into the periosteum of the orbital rim. It need not be cut in such simple cases as those of phlyctenular ophthalmia with photophobia.

CEREBRO-SPINAL MENINGITIS.

Dr. Russel said that, within three days, seven cases of cerebro-spinal meningitis had occurred in the city, three of which had proved fatal. At the suggestion of Dr. Peters, he read the report of an interesting case furnished by Dr. C. E. Simmons. The Health Board were anxious to study the disease, and asked, as a matter of favor, an early report of any cases which might be discovered.

The President had seen two cases on the east side of the city, near Dr. Simmons' case, one of them in the Hebrew Orphan Asylum at Third avenue and Seventy-seventh street. He had also, by the invitation of Dr. Rodenstein, been three times to see the cases under his charge at the Catholic Protectory in Westchester. There were some twenty of them; and five or six had ended fatally. The speaker pointed to the presence of stagnant water between Second and Third Avenues, in the upper part of the town, as connected with the prevalence of endemic diseases in that neighborhood.

CRIMINAL ABORTION.

On motion of Dr. S. Rogers, the Society

Resolved, That the Medical Society of the County of New York indorses the Amendment to the Law of 1869, relative to criminal abortion, proposed by the New York Medico-Legal Society.

Adjourned.

Special Meeting, January 29, 1872.

Dr. A. Jacobi, President, in the Chair.

OBITUARIES.

The meeting was called to hear memorial notices of some deceased members, which had been prepared, under authority of the Comitia Minora, for transmission to the State Society. Dr. Fordyce Barker, to whom had been committed the notice of Dr. George T. Elliot, was unavoidably absent. Dr. Ellsworth Eliot gave an account of the life and labors of Dr. Wm. B. Bibbins; and Dr. Wm. C. Roberts reviewed the career of Dr. Henry D. Bulkley. The leading points of these memorials have already appeared in our columns. Dr. David C. Carr recounted the professional and other services of Dr. Alexander N. Gunn, dwelling especially upon the assistance he had always been ready to proffer to young men. As chairman of the committee on resolutions, Dr. Carr reported the following, which were adopted:—

Whereas, It has pleased an all-wise Providence to remove from his earthly labors Dr. Alexander N. Gunn, a beloved associate, and an honored member of the Medical Society of the County of New York;

Resolved, That in his death all have lost a valued friend and counsellor, and this Society one of its brightest ornaments, distinguished alike for his eminent social qualities, his Christian virtues, and his professional ability.

Resolved, That while we bow in submission to the divine will, we deplore the loss of an active worker in the profession to which he was an honor; of a man who by his genial, sunshiny nature won not only the hearts of his patients, but the confidence and esteem of all who knew him.

Resolved, That a copy of these resolutions be preserved in the archives of the Society, and also that a copy, signed by the President and Secretary, be sent to the family of the deceased.

The meeting adjourned.

A Special Meeting called for February 3d, "to consider, and take suitable action upon, the bill recently introduced into the Assembly by Mr. Flammer, entitled, *An Act to Protect the People against Quackery and Crime*," was very thinly attended, and adjourned without action.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 10, 1872.

Dr. A. L. Loomis, President, in the Chair.

LATENCY OF SYMPTOMS IN EMPYEMA.

Dr. Lewis Smith presented specimens of lungs removed from infants dying in the Infant's and Child's Hospital of this City. The first specimen was taken from a little patient that died at the age of five months and twenty-eight days. Although in charge of one of the best nurses of the institution, nothing unusual was noticed about the child, except a slight hacking cough for two or three days, and some acceleration of the respiration, until it was found dying. On *post-mortem* examination the right lung was found covered with a thick sero-fibrinous exudation. The serum, which was very considerable in amount, was confined altogether in the meshes of the fibrinous material. The case was of interest as showing the latency of the symptoms. There was no evidence to the naked eye of pus in the effusion, although it was probable that pus-globules could be found by the microscope. Dr. Smith was of the opinion that in cases of pleurisy among foundlings in an hospital, pleurisy as a rule degenerated into empyema.

TUBERCULOSIS FOLLOWING BRONCHIAL CATARRH.

The second specimen of lungs was removed from an infant aged four months and ten days. It had suffered from cough for seven weeks, during which time the physical signs of bronchitis had been developed. During the last week of life, in addition to the symptoms referred to, there was an expiratory moan, and this, with other phenomena, led to the diagnosis of cheesy pneumonia. Two or three days before death, evidences of a dilated bronchial tube or a cavity were very distinctly made out.

On making the post-mortem examination, the left lung was found healthy, with the exception of a collection of small miliary tubercles. These masses were also discovered scattered throughout the right lung, in which latter organ also was found a cavity the size of a filbert, and nearly filled with cheesy matter. This cavity was so near the surface that a local pleuritis was excited, which accounted for the respiratory moan heard during life. This cavity was lined by a pyogenic membrane.

In addition, small tubercles, some scarcely visible, were found in the spleen, liver, and in the coats of the large intestine. The other organs were healthy, with the exception of some of the bronchial and mesenteric glands, which were slightly enlarged and contained cheesy deposits. The interest in this case centred in the regular gradation of pathological changes, commencing in ordinary bronchitis and ending in miliary tuberculosis.

The third specimen was removed from a child that died at the age of three months. The patient was supposed to be doing well until eighteen hours before his death, when he began to breathe rapidly, the pulse became accelerated, the temperature elevated, and death finally occurred as the result of what was supposed to be capillary bronchitis.

At the autopsy, both lungs were found studded with tubercles in process of formation, and around them were to be seen zones of vascular injection. Small tubercles were also found in spleen, liver, and in other organs. The mesenteric glands appeared to be healthy, but the bronchial glands had undergone cheesy degeneration.

In answer to a question from Dr. Loomis, he stated that in his opinion empyema was more apt to follow pleurisy in foundlings than in adults.

Dr. Loomis remarked that he had seen cases of acute pleurisy in adults, that were cases of empyema from the beginning, and he had also seen cases of empyema the natural result, apparently, of ordinary pleurisy in a patient otherwise in good condition.

The Society then went into Executive Session.

Stated Meeting, Jan. 24, 1872.

Dr. A. L. Loomis, President, in the Chair.

UTERINE TUMORS AND ASCITES.—A NOVEL METHOD OF TAPPING.

Dr. Caro presented a specimen of the above with the following remarks: Mrs. H———, thirty-nine years old, married twenty years, had no children. She complained, November, 1864, of dysmenorrhœa. On examination, a polypus the size of a cherry was found protruding from the internal os uteri. I evulsed it with a pair of long forceps, and cauterized the pedicle with nitrate of silver. No hemorrhage followed; menstruation returned regularly until September, 1868, when it disappeared. Supposing herself pregnant, she did not inform me of the loss of her catamenia until November of the same year. Examining the uterus, I found she was mistaken as to pregnancy, although her breasts gave evident signs of it. I advised no interference, but to wait for further developments. January 20th, 1869, called in consultation the late Prof. G. T. Elliott. We concluded she was not pregnant, but could not decide upon what prevented her monthly returns, or caused the abdominal enlargement, unless it was simple tympanitis. Nourishing diet was prescribed, and an occasional dose of cream tartar and Epsom salts to regulate the bowels. In February menstruation returned, and continued regular until death; but the abdominal enlargement continued, giving signs of ascites. June 4th, 1869, had her examined in the presence of other physicians, at Dr. Emmet's hospital. As previously done, sound was passed into the womb, two and a half inches. Arrived at the conclusion that she had a fibrous tumor adhering to the womb, and ascites produced by subacute peritonitis. Elaterium and cream tartar were prescribed, also tapping.

June 30th, in presence of Prof. G. T. Elliott, I performed paracentesis, selecting the median line between umbilicus and pubes;—sixteen quarts of fluid were drawn. Microscopical analysis of the fluid was made by Dr. Stephen Rogers, who reports: "The fluid was highly albuminous, contained many blood-globules, and amorphous colored constituents in the form of various-sized dark-brownish masses. There are also a few granular, cell-like objects, containing one or more nuclei, in fact exudation corpuscles." Suspecting them to proceed from a cystic cavity, I changed my treatment and prescribed:—

Spiritus mindereri	℥ iv.
Acidum aceticum	℥ j.
Tr. ferri chloridi	℥ ij.

A tablespoonful three times a day.

This remedy increased the flow of urine, but did not arrest the ascites. She was tapped every second month as follows: August 30th, 1869, second tapping, twenty-one quarts were drawn; October 26th, 1869, third tapping, twenty-three quarts were drawn; January 4th, 1870, fourth tapping, twenty-five quarts were drawn; March 19th, 1870, fifth tapping, twenty-four quarts were drawn; May 11th, 1870, sixth tapping, twenty-eight quarts were drawn; July 9th, 1870, seventh tapping, twenty-eight quarts were drawn; August 29th, 1870, eighth tapping, twenty-seven quarts were drawn; November 1st, 1870, ninth tapping, thirty-one quarts were drawn; December 15th, 1870, tenth tapping, thirty-two quarts were drawn; February 10th, 1871, eleventh tapping, thirty-six quarts were drawn; March 30th, 1871, twelfth tapping, at Emmet's hospital, thirty-six quarts were drawn; May 27th, 1871, thirteenth tapping, twenty-six quarts were drawn.

Left canula permanently, with a faucet, so she might draw the fluid herself, but during that night it came out. July 11th, 1871, fourteenth tapping, twenty-eight quarts were drawn, and canula left in situ until December 10th, when it was removed to be repaired. After removal the flow of fluid stopped, and abdominal pains commenced. January 10th, 1872, she died of peritonitis. On post-mortem examination, a vast amount of fatty degeneration was found around the womb; to the left fundus of the uterus, two ovarian cysts, about the size of a pine-apple, adhering to one another; and above them a tumor of calcareous nature, adhering firmly to the diaphragm, the abdominal vaults firmly adhering to the cysts and tumor, and the peritonæum to the intestines infiltrated with a serous fluid.

The fluid from the cysts and the tumor were examined by Dr. S. Rogers, who reports as follows: "The hard masses found in the substance of the specimen are composed of irregularly spherical bodies, carbonate of lime, adhering to each other very firmly. It is hence calcareous, not osseous. The tumor is a somewhat degenerate fibroid growth. The fluid from an adjacent cyst is of a brownish color, and abounds in crystals of cholesterine, fatty granules, and globules. It is therefore not improbable that the cyst represents a degenerate and liquefied fibroid tumor."

The amount of fluid by paracentesis was 381 quarts, and drawing at an average one pint a day from July 11 to December 10th, was seventy-six quarts, total 457 quarts. Of the mixture, as above prescribed, 244 oz. was used.

Dr. Hart referred to the possibility of the tumor being cancerous, as, according to Prof. Thomas, the persistent accumulation of serum in the abdominal cavity was almost pathognomonic of that disease.

Dr. Loomis remembered one case where tapping was performed twenty-eight times. The patient, a lady, had been tapped twenty times by the late Prof. Simpson, of Edinburgh. The intervals of tapping grew longer, and the last operation was performed as long ago as four years.

ANEURISM AND ITS RELATION TO SYPHILIS.

Dr. Flint exhibited a specimen of aneurism of the abdominal aorta. The history of the case was very incomplete, the patient being received in the hospital only a few hours before his death, and then in a state of almost complete exhaustion. It was ascertained, however, that he had had syphilis fourteen years before, followed by certain constitutional symptoms, affection of the throat, eruptions, etc. During last summer he had complained of pain in the back and abdomen. After his admission he rallied somewhat on the use of stimulants, so that the facts above narrated were obtained. The house physician ascertained the presence of a tumor which he found to be pulsating, but he discovered neither thrill nor murmur. Shortly after his temporary improvement he raised up in bed, when he complained of feeling faint, was laid back, and expired almost immediately.

The abdominal aorta, just above the renal arteries, showed a large circular opening, perhaps an inch and a half in diameter, which communicated with an aneurismal sac the size of a small orange. There was a perforation in the sac large enough to admit the end of the little finger. There was some blood infiltrated in the areolar tissue beneath the artery, and the peritoneal cavity contained a large quantity of blood. The specimen was of no particular interest except the fact that it occurred in a patient who had syphilis, and that, in all probability, there was a certain amount of hemorrhage from rupture before he was admitted into the hospital, and that the hemorrhage was arrested by temporary coagulation. The internal coat of the artery was lined with atheromatous deposits. The patient was 37 years of age.

SYPHILIS AND VALVULAR DISEASE.

Dr. Janeway believed that syphilis was not only a very common cause of aneurism, but also of valvular disease. He had met with two cases of thickening of the valves which could be explained in no other way.

Dr. Flint had not had his attention drawn particularly to syphilis as a cause of valvular disease, but thought that it might explain many of the cases of the latter lesion, in which none of the usual causes were made out.

Dr. Mason had seen several cases of aneurism which appeared to be the direct result of constitutional syphilis. He referred to one case in point, occurring in a man aged 33.

Dr. Loomis alluded to a long list of cases published within the last two years in the *Lancet*, in which all under the age of forty gave a syphilitic history.

Dr. Rogers was reminded of a case presented to the Society ten years ago, of very extensive aortic disease, in a young man 28 years of age, who had contracted syphilis only eighteen months before his death. The patient eventually died of extensive aortic disease. In that case no other cause for the arterial and cardiac lesions was assigned than syphilis.

PERIPHERAL PLACENTITIS.

Dr. Rogers presented a fœtus, with the following remarks:—About a month ago I presented a specimen of placental disease that has been ranked as comparatively rare. Its history was, that a lady, at about the beginning of the fifth month, or a little after, began to suffer from the escape of blood from the vagina, with uterine contractions which were regarded, by every one who saw her, as threatening abortion. The bloody character of the discharge subsided little by little; but at various intervals she had very large discharges of colored fluid, in such abundance as to saturate six or eight napkins in a single evening. In that case there were also, within a period of two months, after frequent threatenings of abortion, contractions of the uterus, with the escape of more or less bloody fluid. So marked were these contractions that the lady herself would call attention to it. There was a good deal of interest attached to the case, and some of the leading obstetricians were called in to see it. It was regarded as a case of cystic degeneration of the ovum. However, from time to time, besides bloody fluid there was a discharge of such a material as is seen in this vial. [A vial exhibited, containing blood-stained shreddy material,

floating in a bloody fluid.] Sometimes a plug of this material, as large as the little finger, would come away. Notwithstanding the case was diagnosticated as a cystic degeneration of the chorion, there was evidently a live fœtus in the womb. It went on growing, and continued active up to the last. It was early in the fourth month that the symptoms commenced. Towards the end of the fifth month labor came on, and when I arrived I found the caput succedaneum protruding, and soon delivered the woman of a child which breathed an hour after birth.

The placenta was found diseased; its whole periphery was blackened and shreddy. In some portions of the organ it had gone on to an extent of three-fourths to an inch in depth. It was a striking example of a disease of the whole periphery of the placenta. It struck me at once as a case of peripheral disease the like of which I had never seen. I recited the appearances to Dr. Noeggerath, and he made the remark that the case was one of peripheral placentitis.

I present another specimen very similar to the one just described. This case had advanced to the sixth month. The mother received a shock, caused by one of her children running against her abdomen. Soon after she was taken with a discharge of blood from the vagina. There were no uterine contractions nor pain. All that was noticed for a few days was a little bloody discharge, when it became less bloody. But at various intervals she would have these large discharges blood-stained, which would saturate half a dozen napkins at a time. She went on for two whole months, and when labor set in the child was evidently alive. The presentation was a breech one, and the head of the child was detained so long that life was destroyed—at least such was the belief of the attendant. At all events, the child was alive two hours before labor set in. The placenta presents a little different appearance from the first; it is much smaller, and its whole structure is lobulated. When this specimen was first brought to me I found evidences over more than three-fourths of its periphery of this same kind of inflammation—peripheral placentitis. At two or three points there were little clots of blood, but the marked feature was a layer of fibrinous material—thicker at some places than others—all around the edge of the placenta. Dr. Jacobi was disposed to look upon the fibrinous clots as the residue of the hemorrhages. That may be so, but in the case which I presented, during one period of more than two weeks, there was scarcely any hemorrhage; it was almost pure water, and on some occasions there were those extra fibrinous clots, and during that period she had more discharge of those fibrinous shreds than she had immediately after, or about the time when there had been most hemorrhage. They ran through a period of more than a month.

I have since asked some questions of persons versed in the literature of the subject with reference to the frequency of this kind of placental disease, and I am precisely where I was a month ago, viz., that there is not very much written or said about it in that form. Dr. Noeggerath said then that the only paper written on this subject was by Braun, of Vienna, several years ago. The first case, presented a month ago, has had no untoward symptom, and is perfectly well. The first lady was delivered two years ago of a child that remained in utero a month after it died. The child was killed at the eighth month by metro-peritonitis, which interrupted the fœtal circulation. The mother in a measure recovered, and went on to full term. She had metritis after delivery, and a little pelvic cellulitis. She therefore had the antecedent of uterine inflammation established, which this person has not.

Dr. Janeway thought that there might have been a partial detachment of the placenta in this last case, attended first with a discharge of blood, then serum with the shreddy material—the result of the breaking down of the clot.

Dr. Rogers thought that this was the case in both instances.

FRACTURE OF SKULL.

Dr. Janeway presented a specimen of fracture of skull, with the following history:—

The patient from whom this specimen was taken was a female forty years of age, who, as subsequently to examination, was found to have been struck in the head by a hatchet, some five years before. She was admitted to hospital the day before death, paralyzed on the right side, and unable to give any account of herself. Later it was found that she had fallen down-stairs. She died with symptoms of compression of brain. Service of Dr. Smith.

Autopsy, Dec. 23, 1871.

Exterior.—Large amount of adipose tissue. A slight white cicatrix over the upper and middle portion of the right parietal bone. Some bruises on forearms.

Scalp.—Extravasated blood in the tissues of left side posterior part, and a lacerated wound behind ear.

Skull.—A fissure on left side, starting from centre of occipital bone, passes forwards through line of lambdoidal suture, petrous portion of temporal bone, into larger wing of sphenoid bone, as far as foramen rotundum. The middle meningeal shows a small lacerated opening in its main branch.

A large clot exists between dura mater and bone, principally situated over posterior lobe of cerebrum, outer and lower part of left side.

On the right side of skull, corresponding to the line of cicatrix above mentioned, a depression of outer table of skull is found, oval in shape, and situated diagonally between coronal and sagittal sutures. The border of the depression is rounded, smooth, and it and the depressed portion are lined by thickened periosteum. The depth of depression is 3-20 of an inch; length 1 inch. On the inner side of skull, at this point, the internal table forms a sort of wedge-shaped projection, 1-5 of an inch high, and having a line of fracture running along the ridge or apex. This latter portion is still quite sharp. The dura mater at this point presents a similar shaped depression, but no other lesion.

Brain.—There is a depression of brain on the right side, corresponding to site of depressed fracture, but without other lesion. A vein going to longitudinal sinus is pressed on, and the result has been a varicose condition on the distal side. On the anterior portion of brain, right side, the convolutions are flattened, sulci somewhat obliterated, and subarachnoid serum absent. The left side showed a severe contusion of lower part of left middle lobe, and extending across fissure of Sylvius so as to implicate the extremity of the third frontal convolution. The tissue at this point is softened to a pulpy state, and ecchymotic cervical convolutions of frontal lobe were in a similar state. The brain-tissue of posterior lobe presented a depression corresponding to the site of clot of blood between dura mater and brain.

The ventricles contained the usual amount of serum, slightly blood-stained.

The other viscera, with the exception of kidneys, were normal.

These latter presented a granular surface and atrophied cortex, and were smaller than usual.

The depression in this case led to the question of the propriety of an operation.

But Dr. Stephen Smith, the visiting surgeon, decided

against the propriety, because of the marks of injury behind left ear and of the paralysis on the right side. I have thought that the coincidence of the two lesions would be of some interest.

PSEUDO-TRACHEO-BRONCHITIS.

Dr. Lewis Smith presented a specimen of pseudo-tracheo-bronchitis, which was removed from a woman twenty-four years of age. She was admitted into the lying-in wards connected with the Nursery and Child's Hospital in Nov. last. Nothing unusual was noticed in her condition until the third of the present month, when the house-physician, Dr. Beckwith, found her urine albuminous. Jan. 9 she called his attention to her throat, but on examination nothing worthy of note was discovered. On the third day after she began to suffer considerably from dyspnœa, which condition increased so much in severity that by the thirteenth she was unable to lie in bed. At the same time a dry cough developed, and the physical signs of œdema of the lungs showed themselves. Death occurred two days after. As no other signs showed themselves, it was thought probable that death had been due either to œdema of the lungs or to œdema glottidis.

On *post-mortem* examination, the following day, a pseudo-membrane covering the lower part of the epiglottis, trachea, and bronchial tubes to their third division was discovered; the membrane growing thinner as it went downwards. The underlying mucous membrane was intensely injected.

The fauces had been inspected every day until within twenty-four hours of her death, and no appearance of membrane was noted. On careful examination at the autopsy it was discovered that the membrane had just begun to make its appearance upon the pharyngeal surface of the epiglottis, which condition might have been observed had an examination of the parts been made within ten or twelve hours of death. There were found large clots in all the heart cavities, which were much dilated. Those in the right ventricle extended through the pulmonary artery to the lungs. The appearance of the membrane, its symptomatology, and the surrounding circumstances of the patient seemed to justify the opinion that this case was one of true croup rather than of diphtheria, which fact made the specimen interesting, occurring, as it did, in a person of that age.

Dr. Janeway referred to a case illustrating the rapidity with which œdema of the lungs can show itself in cases of arrest of respiration. The patient was choked while eating his dinner in one of the wards of Bellevue; relief was obtained by immediate tracheotomy, and nothing was found in the air-passages, as far as any exploration could be made. In five minutes from the time of the accident the patient died of secondary œdema of the lungs.

Dr. Loomis presented a specimen, rather as a matter of curiosity than otherwise. The history of the patient from whom it was removed was very incomplete. She was forty years of age, and was admitted into Bellevue on the 11th of Dec. in a very exhausted condition. About a week before admission she suffered from intense pain in the right hypogastric region, which extended into the iliac region. About two days after this pain made its appearance she began to vomit, and had diarrhœa. The vomiting and diarrhœa continued up to the time of her admission. She had had a similar attack about a year before, from which she recovered after a lingering illness. The house-physician noticed that there was a very offensive discharge from her vagina, and in making an examination he found that the finger could not enter more than an inch, when it was arrested by a mass of roughened tissue. He regarded it as a case of cancer, and did not make a very thorough investigation of the exact condition of things at that time. Her abdomen was quite tympanitic, and soon after admission she sank into collapse.

At the autopsy there were evidences of extensive peritonitis. In the right side of pelvic cavity there was an increased amount of connective tissue, and the broad ligament was thickened and hardened. There was an abscess at the rim of the pelvis, and it seemed as though another had broken into the pelvic cavity. All the tissues in the neighborhood had been thickened and indurated; the bladder was pressed forward, and rectum flattened and adherent to the posterior wall of the uterus. The uterus itself seemed somewhat enlarged.

The interesting point was that on opening the vagina a spool, an inch and a half in length and three-quarters of an inch in thickness, was found in its cavity. Through the canal of this spool was a thread, knotted at its upper end. The lower portion of the tube was covered with calcareous incrustations. This foreign body, which had doubtless remained in its position for a considerable time, had ulcerated into the bladder, and had given rise to all the pathological changes in the pelvic cavity, ending secondarily in the peritonitis which caused death.

The Society then went into Executive Session.

Correspondence.

LESSONS FROM SANDRINGHAM.

To the Editor of the Medical Record.

Sir:—It is not often that the management of any medical case assumes the proportions of a public event. When it does, besides the interest of the masses, and the reputation of the attending physicians, there are at stake the general standing of the profession, and the rank then assignable to physic among the physical sciences. The case of the Prince of Wales was of this class.

In order to avoid even the appearance of being influenced by popular and contradictory clamors in a question whose scientific interest is hardly second to the political, we have postponed the expression of some of the remarks suggested by the character of the bulletins of the physicians who attended to this memorable case. But now that the public has rendered its ordinary verdict: "All is well that ends well," let us say that all that came from Sandringham was not as well as it could have been for the eminent physicians themselves, nor for the profession at large, nor for the fair name and promotion of medical science.

We particularly refer to the sanitary bulletins as not representing accurately the condition of the patient, as virtually and wrongfully ignoring the new means of clinical description whose veracity cannot be impugned, and as made up of the flabby expressions of alternate fears and hopes.

We have simply heard that the Prince was better, worse, recovering, sinking, rallying, convalescing, relapsing, and finally recovering. For many weeks this was all the news given to an attentive world. The prognosis was as wavering, and seemingly as uncertain, as it might have been half a century ago, before thermometry or sphygmography was dreamt of. Naturally, these bulletins, very much resembling those issued from Metz when France had the misfortune of not losing Louis XV., alias *le bien-aimé*, were soon dis-

trusted, and accused of exaggeration, even of falsehood; and openly said to be calculated in view of manufacturing loyalism, or for the vile object of fostering gambling combinations.

That men like Drs. Jenner, Gull, and Lowe, whose scientific reputation is so high, could have exposed themselves, and the medical profession as a body, to such impossible imputations, shows that there was a serious misconception of their duties to the sceince of medicine, and that at a time when they had the whole civilized world for an audience.

It seems that the cause of their mistake was the idea that the majesty of the subject precluded the possibility of publishing the true clinical record of his sickness, as if the disease should behave differently in a Prince than in a simple hospital patient. This courtly idea offers the only extenuation for the unscientific character of these bulletins, but is far from finding its justification even in courtly habits and traditions. For these traditions and habits have always been, in case of sickness of a Queen, King, or Crown-Prince, to issue bulletins as complete as the science of the time could afford, and to keep the royal patient constantly in view of some of the high officers of State.

And why that publicity of sickness and death; why cannot a king agonize quietly; why must peoples prey upon his decomposing form by minute reports and by *de visu* proxies? Evidently because a prince —whatever could otherwise be his individual worth— is a cipher, whose social value is borrowed from the millions standing by him, millions who have never been denied the right to know what becomes of the zero.

Therefore we do not hesitate to affirm that, if the physicians of the Prince of Wales in issuing their bulletins have literally conformed themselves to courtly traditions, in avoiding or neglecting to stamp these bulletins with the seal of modern positivism, they have forfeited the confidence of the English nation; they have left the door of their council-chamber open to untrue but deserved suspicions; they have neglected a solemn occasion of impressing the people with the precision of the methods of observation which have been substituted for guessing at the bedside; and thereby these eminent physicians have, in no small degree, lowered, or at least prevented the legitimate rise of, the standard of physic in public estimation.

On the contrary, let us for an instant suppose that these eminent men, improving the opportunity actually offered to them by the tradition of all the courts of Europe, would have clothed their bulletins in the scientific form adopted by the medical institutions of London, Paris, Vienna, Berlin, New York; these daily or hourly reports would have been written in a few figures, and summed up every septenary. They could also have been accompanied by a few commentaries, such as escape from the lips of a medical man looking at the table of vital signs appended to the bed of an ordinary subject of typhoid fever.

In the supposition that these popular and progressive views had prevailed in the judgment of the physicians in charge at Sandringham, the world would have assisted to a novel and dramatic spectacle. We do not mean the spectacle of the pitiable youth slowly eaten up, then let go by the ulceration of his Peyer's glands—we mean the narration, by telegrams, of the phases of an almost typical case of complicated typhoid fever. Never before would nations have listened to such a tale, mainly told in advance, like a prophecy, by the thermometer; never such interest would have been attached to predictions of better or worse, foreshadowed on the stem of the instrument, and to the degrees of vitality infused in the patient by tonics or food, and written in the pulse-wave of the sphygmograph. Such a medical problem would never before have been solved to a larger or more interested audience: no better opportunity could have been found to prove to the civilized world how much of a science medicine has come to be.

If this mode of bulletins had been adopted—and we firmly believe that Aitken, Sydney Ringer, Wunderlich, or Jaccoud would have carried it out—what an impulse would that lesson on positive diagnosis have given to the profession; how higher would physic have instantly ranked in the estimation of the public; and, to speak but once like courtiers, what a chance the Prince would not have lost of being as useful and celebrated for his sickness as his father was for his goodness! These are some of the lessons we had, and had not, from Sandringham.

E. S.

New York, Feb. 20, 1872.

CLAY-DRESSINGS FOR VARIOLA.

To the Editor of the Medical Record.

Sir—During the recent epidemic I used clay-dressings for two pretty decided cases of confluent small-pox. Both patients were young women. One, a married lady, æt. 23 (delivered on the second day of a six months' fœtus), made a fair recovery, took cold after getting up, and in a few days died suddenly of empyema and pericarditis; diagnosis confirmed by autopsy. The other, single, æt. 21, had the disease with great violence, recovered rapidly, and is now well. In each case I dustest finely-sifted pipe-clay over the face as soon as the pustules became fairly developed. This formed immediately a clean, dry, wholesome scab; abolished the intolerable itching and burning; served apparently as a good absorbent of infectious material; and sealed off during convalescence, leaving underneath a soft, natural integument.

There was no disfigurement in either case.

E. S. Bunker, M.D.

Brooklyn, Feb. 12, 1872.

MEMBRANOUS CAST OF VAGINA.

To the Editor of the Medical Record.

In your issue of January 15th, p. 512, appears a very interesting communication from Dr. G. H. Miner, in which he describes a membranous cast of the vagina, expelled by one of his patients. I have never seen a like example, but if Dr. Miner will read the last page of the ninth chapter of Montgomery "On the Signs and Symptoms of Pregnancy," I think he will find a very satisfactory explanation of these curious formations.

Dr. Montgomery attributes them to the coagulation and condensation of the epithelium and mucus of the vagina by injections of nitrate of silver, and Dr. Miner had used in his case "a very strong solution—℥j. to ℥j. of water."

Wm. Goodell, M.D.

Preston Retreat, Philadelphia.

The Darwinian Theory.—The *Wiener Med. Presse* contains a singular argument in favor of the doctrine of Darwin, that man has developed from an ape. It is found in Brazil that the ape is equally susceptible with man to the ravages of yellow-fever, all other animals enjoying an immunity from the attacks of this disease.

Obituary.

PROF. CHARLES A. LEE, M.D.,

PEEKSKILL, N. Y.

Our old friend, Prof. Charles A. Lee, is no more. He died February 14, 1872, at his home in Peekskill. It is safe to say that no one medical man has contributed more largely to the literature of his profession than he has. From early life to an advanced age his pen has been busy in many departments of the healing art, and by dint of great industry and application he soon won for himself the very enviable reputation of a learned writer. Nor did his powers of composition, or his ability to think deeply, forsake him in the latter days of his career. It would be impossible to give more than an epitome of his literary labors, extending as they did over nearly half a century. He has edited *Lee's Physiology*, a work formerly in extensive use in our schools; *Elements of Geology*, *Copeland's Medical Dictionary*, *Pereira on Food and Diet*, and many other works. He was for many years Professor in the New York University, the Bowdoin Medical College, Berkshire Medical School, the Medical School at Woodstock, Vt., Geneva Medical College, and was also one of the founders of the Buffalo Medical School. In connection with the late Dr. Stewart, of this city, he, many years since, established the Northern Dispensary, an institution which has been of great and incalculable benefit to the poor of New York. He was for many years editor of the New York *Journal of Medicine*. During the years 1860 and 1861 he made an extensive tour of Europe for the purpose of ascertaining the accepted methods of treating the insane. He visited all the noted Insane Asylums abroad, and gave the results of his labors in an extended series of carefully written letters to the *American Medical Times*. From that time he became much interested in the study of psychology, and was soon enabled by his writings in the various periodicals of the country to establish the reputation of an authority on mental diseases. He was not unfrequently called upon as an expert to testify upon important criminal cases, and his opinions, often elaborately written, received the warm commendations of the presiding judges. He has been a frequent and esteemed contributor to the columns of this journal, and has always been ready and willing to give us that counsel which was the offspring of a sound judgment and of a conscientious regard for strict justice.

During the recent war his services were tendered to the Sanitary Commissioner, and as an inspector he rendered invaluable aid. If we were to enumerate his labors as member of the many Committees of the American Medical Association of the State and pharmaceutical societies, we might fill pages; suffice it to say, however, that in the capacity of a worker in such avocations he was untiringly devoted to the best interests of his profession and to the surest means of advancing our art. In the cause of medical education he was a faithful exponent of the views of the rising generation, and was never backward in expressing his opinion in an unmistakably radical manner. During the past two years he has been compelled, on account of declining health, to withdraw himself somewhat from the occupations he so dearly loved. Among other things he resigned his professorship at the Buffalo Medical School, of which, as has been before stated, he was one of the founders.

He was a zealous churchman, and his spare time was devoted, in a quiet and unostentatious manner, to the support of Christianity. He lived the life of a consistent Christian, and in his walk and conversation, from his youth until the close of his earthly career, he proved the excellence of his spiritual choice. As a man he was upright in all his dealings, radical in his views, and an uncompromising enemy to fraud in any shape. Quiet in his demeanor, affable in manner, and earnest in spirit, he won for himself a large number of friends, who will unite with us in dropping the tear of affection upon his honored grave.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, U. S. Army, from February 5, 1872, *to February* 18, 1872, *inclusive.*

Mills, Madison, Surgeon.—By S. O. 30, War Department, A. G. O., February 5, 1872, granted leave of absence for sixty days.

Frantz, Jno. H., Surgeon.—By S. O. 38, War Department, A. G. O., February 14, 1872, to report to the Commanding General, Department of the South, for assignment to duty.

Mackin, Chas., Jr., Assistant Surgeon.—By S. O. 33, War Department, A. G. O., February 8, 1872, to report to the Commanding General, Department of the South, for assignment to duty.

Hoff, Alexander H., Assistant Surgeon.—By S. O. 31, War Department, A. G. O., February 6, 1872, assigned to duty at Fort Columbus, N. Y. Harbor.

Kimball, J. P., Assistant Surgeon.—By S. O. 33, War Department, A. G. O., February 8, 1872, assigned to temporary duty at Fort Columbus, N. Y. Harbor, to accompany the first detachment of recruits to New Orleans, La., and, on arrival, report to the Commanding Officer, Department of the Gulf, for assignment to duty.

Loring, L. Y., Assistant Surgeon.—By S. O. 18, Department of the Mo., February 2, 1872, to proceed to Fort Leavenworth, Ks., and report to the Commanding Officer for assignment to duty.

Medical Items and News.

Marriage *v.* Celibacy.—M. Bertillon read a paper at the sitting of the Academy of Medicine of Paris, on the 14th of November, entitled "*Influence du marriage sur la durée de la vie et sur les maladies intellectuelles ou morales*," maintaining the healthful influence of conjugal association as compared with that of celibacy, and using as evidence the statistics of France, Holland, and Belgium. According to his figures, between the ages of twenty-five and thirty years 1,000 married men furnish 6 deaths; 1,000 bachelors, 10 deaths; and 1,000 widowers, 22 deaths. From thirty to thirty-five years of age, the same classes, respectively, furnish 7, 11, and 17½ deaths. From thirty-five to forty years of age the mortality is 7½, 13, and 17½ per 1,000 respectively. And so on in a series of tables for all ages, the married man has always the advantage of the single man; but what is the explanation of the fact that among widowers the mortality is even greater than among bachelors? In the case of men married under the age of twenty, the statistics show anything but a salutary result. Out of 8,000 of

this class, the mortality was, before marriage, only 7 per 1,000; *after marriage it was* 50. This is a constant result in Paris, Belgium, and Holland. Everywhere young married people, from eighteen to twenty years of age, die as fast as old people of from sixty to seventy years of age. The conclusion seems evident, according to Hufeland, "that the premature use of the genital organs is the most sure means of inoculating old age." This astonishing mortality being due to no special malady, but to a general enervation, which, without doubt, renders them a prey to any disease.

The same advantage of the marriage state obtains in the case of females, though up to the age of thirty the difference is not so apparent as in the other sex. From thirty to thirty-five the mortality is 11 per 1,000 for single women, and only 9 per 1,000 for married women, and this difference increases up to the age of fifty-five. Thus, from fifty to fifty-five years of age 1,000 wives furnish only 15 or 16 deaths, whilst as many single women or widows furnish 26 or 27. This advantage remains very notable beyond that age, diminishing but little. In France, however, under twenty-five, and in Paris, under twenty years of age, marriage is far from favorable, but even injurious, as in the case of males. The mortality of unmarried girls of from fifteen to twenty is 7.53 per 1,000; the mortality of wives of the same age being 11.86. The mortality of girls from twenty to twenty-five is 8.32; of wives of the same age, 9.92; the difference in this class being due, no doubt, to pregnancy and its accidents. The deadly effects of widowerhood in men is equally shown in the case of widows up to the age of thirty, and after forty-five more single women than widows die.

The influence of marriage on criminality is not less striking. Whilst the criminality of single men for crimes against the person is 100, in married men it is only 49, and 45 for offences against property. The criminality of widows and widowers approaches that of celibacy. Relative to suicide, the author concludes that this cause of death is reduced one-half by marriage.

Chair of Physiology in the University of Paris.—MM. Béclard and Vulpian are candidates for the above position, left vacant by the death of Longet.

Is Insanity on the Increase?—Dr. Henry Maudsley, writing on this subject in the *British Med. Journal*, says: "It may be true, and probably is true, that there is more insanity, and more occurring insanity, in proportion to the population now, than at the time when our forefathers followed Boadicea to the battle; but that so many more persons should be yearly going mad now than twenty-five years ago, seems to me a supposition which is, I will not say preposterous, but is certainly not probable in itself, and not supported by facts. There is abundant evidence of a gradually improved registration of insanity, and of a great increase in the returns in consequence of that improvement, but there is not yet satisfactory evidence of anything more." "Some part of the difference," he says, "is owing to the fact that certain patients are registered as lunatics now who would never have been thought so in times past." Also, "a lower rate of mortality and a lower percentage of recoveries may account for an increase in the total amount of insanity."

Conjugal Onanism.—In an important clinical lecture on "Conjugal Onanism and Kindred Sins," by William Goodell, M.D., Clinical Lecturer on the Diseases of Women and Children, University of Pennsylvania (*Phila. Med. Times*), the resulting disorders from imperfect sexual congress, on the part of man and wife, are plainly discussed. He says the husband suffers mentally, because no *man* can behave in so unmanly a way without a keen sense of self-abasement, without being stung by the chastisement of remorse. The wife suffers the most, because she both sins and is sinned against. She sins, because she shirks those responsibilities for which she was created. She is sinned against, because she is defrauded of her rights. The excessive stimulation of the whole reproductive apparatus remains unappeased. Excessive coitus, even when normally performed, and especially indulged in during the fatigue and discomforts of the honey-moon journey, so often the starting-point of uterine disease, with the disorders resulting therefrom, were alluded to.

Such papers are especially needed at the present time, as some members of prominent societies, like the "London Dialectical Society," have been earnestly advocating plausible arguments against "Over-Population and Large Families."

Excision of the Elbow-Joint.—John Reddy, M.D., Physician to Montreal General Hospital (*Canada Med. Journal*), relates a favorable case of excision of the right elbow-joint, for caries in a patient aged seventy-two years. The olecranon was first removed, then the articulating ends of the radius and ulna, to the extent of about three-quarters of an inch, and lastly, about an inch of the end of the humerus. Six months subsequent to the operation, the patient enjoyed a tolerably fair use of the arm, complete flexion being the most deficient movement. Dr. Reddy considers this case establishes the fact that advanced age does not prove so great a barrier as is generally supposed to excision of the elbow-joint. The only two published cases, he remarks, where it had been performed late in life, were first by Mr. Erichsen, at the age of sixty-three, issue successful; second by Mr. Beckerslette, of Liverpool, aged sixty-four, when the patient died of exhaustion on the twenty-sixth day.

Hesitation in Curing Eczema.—Mr. Milton (*Med. Press and Circular*) for years has done his best, in every instance, to check the discharge of eczema as quickly as possible. During that period above 5,000 cases have passed under his notice. He concludes that the fear of curing eczema, of however long standing it may be, and however delicate the health of the patient, is not warranted by either proof or analogy; that no known agent possesses the power of repelling eczema; that we can cure it only by means which improve the health at the same time; and that it is as justifiable to arrest its discharge as that of diarrhœa or cholera. All that has been said of eczema may be said of ulcer; there is no danger of healing it up, no bad symptoms ever arose from doing so.

Alabama Insane Hospital, Tuscaloosa.—The eleventh annual report of this institution, for 1871, exhibits the following: Oct. 1, 1870—there were 222 patients under treatment. Since then, 139 have been admitted, making an aggregate of 361 under treatment during the twelve months ending Oct. 1, 1871. Of this number 33 were discharged recovered, 9 improved, 5 unchanged, and 26 died. Remaining in hospital Oct. 1, 1871, 288.

Of the causes of death, marasmus carried off 8, epilepsy 4, exhaustion 4, heart disease 3, and renal disease 2. Of those remaining 149 are men, and 139 are women—50 are colored. The building was built to accommodate just 250 patients. The cost per annum, of each patient, was $211.86. The average cost to the twenty-two prominent insane institutions of the United States, per capita, for the maintenance of the insane, is $272.48

per annum. The treatment in this hospital was based upon the recognition of disordered mental manifestations as consequent upon physical lesions, in accordance with the advanced views in psychology.

The *resident officers* are: P. Bryce, M.D., supt. and physician; John Little, M.D., assistant physician.

Sulphur in the United States.—On the shores of the Mississippi, below New Orleans, two miles from the sea, in making an artesian boring, a stratum of pure sulphur, 100 feet thick, was discovered at the depth of 543 feet.—*New Remedies—Transl. from Zeitschrift des Oesterr. Apothek.-Vereins.*

Electrical Prize.—The prize of fifty thousand francs ($10,000), offered by the Minister of Public Instruction in France, April 18, 1866, for five years, for the most useful application of the Voltaic Pile, was not granted to any candidate. The competition has been extended for another five years, terminating Nov. 29, 1876.

The Actonian Prize.—The prize fund of two hundred guineas, offered by the Royal Institution for "The Theory of the Evolution of Living Things," will be awarded this year, as a single prize, or in sums of not less than one hundred guineas each. Competitors should send their essays to the Royal Institution before June 30, 1872. In December, 1872, the adjudication will be made.

Medical Fees and Professorships, etc., Abroad.—A doctor who is not celebrated costs four or five English shillings in Paris, and a guinea in London. A professor at the College of France receives £300; at the Sarbonne, £480; or at the Paris School of Medicine, £400. A professor at Oxford has often from £1,000 to £3,000. The head-master at Eton has a salary of £6,680; of Harrow, £6,280; of Rugby, £2,960.

Philadelphia Medical Times.—Dr. James Tyson, of Philadelphia, has retired from the position of assistant editor of this journal, in consequence of the demands made upon his time by professional engagements.

The U. S. Army Medical Museum.—Fifteen hundred and sixteen new specimens were added to this Museum during the year ending June 30, 1871. The total number is 15,018. During the year, 15,000 persons visited it.

A Western Monthly Medical Journal Changes its Name.—The name of *Cincinnati Medical Repertory*, with the opening of the year, has been changed to *Cincinnati Medical News*. The editor is J. A. Thacker, M.D., assisted by the following associate editors: Drs. R. C. S. Reed, A. J. Miles, and D. D. Bramble.

The Agency of the Mind in Etiology, Prophylaxis, and Therapeutics.—Prof. Austin Flint, New York (*Am. Practitioner*), in a practical paper on this subject, remarks: That the proper exercise of all the faculties of the mind, the sentiments as well as those belonging to the intellect, is the great requisite for mental health, and consequently for happiness.

Mental disorders not amounting to insanity, it seems to him, are not sufficiently considered by medical writers, and their importance is apt to be underestimated by practitioners of medicine. These disorders not infrequently precede and lead to insanity; and there are grounds for the belief that timely attention to the former, on the part of the physician, would often prevent the latter. Those who give exclusive or special attention to the treatment of cases of insanity, do not, as a rule, see patients until after they have become insane. The treatment of mental maladies, which precede and lead to insanity, must devolve upon the general practitioner.

In so far as bodily health and vigor afford protection against disease, the exercise of these sentiments is prophylactic. The state of the mind of a patient enters in many cases more or less largely into the prognosis. To develop and maintain this, hope and confidence should enter, within proper limits, into the aims of the physician. In regard to the success in treating diseases and obtaining practice, the mental temperament of the practitioner has much to do in this matter. Some physicians are prone to look always on the dark side of cases. Others are distinguished for always taking the most hopeful view of cases; they look ever on the bright side. The effect is often more powerful than medication. There is an injudicious extreme in the latter direction, and between this extreme and the opposite there is a golden mean; but if there must be a deviation from this mean, it is desirable that it should incline to hopefulness rather than despondency.

Aiken, South Carolina, as a Resort for Invalids.—This town is situated in the northwestern portion of the State, 120 miles from Charleston, and 17 miles from Augusta, Georgia. It is 600 feet above tide water at Charleston, and 400 feet above the Savannah river at Augusta. The South Carolina railroad passes through the centre of the town, making direct connection with the Charleston steamers from New York and other northern ports. The township contains 4 square miles, situated on a nearly level plateau. The streets are all 150 feet wide, crossing each other at right angles. The building lots or squares contain 4 acres each, with one, two, or more houses. The streets are all well shaded with a great variety of the original forest trees; such as oak (five or six varieties), pines, China, wild orange, mulberry, and black walnut. The soil is a white sand, with an under-lay of red clay. The sand varies in depth from 12 inches to as many or more feet. The wells and numerous springs furnish an abundant supply of pure, sweet, and limpid water. The wells vary from 80 to 125 feet in depth. From the nature of the soil and the elevated location of the town, the climate is dry and moderately bracing in winter, rendering it a favorite place of resort for invalids from the North, especially those afflicted with pulmonary disease, from the slight cases of bronchitis to those of a more grave nature, and chronic affections of the nervous system. The climate in winter is delightful. Invalids can exercise in the open air from morning until evening without any unpleasant effect; seldom needing an overcoat in the middle of the day. The dense pine woods, with their agreeable odor, furnish delightful drives and rides over the hard, level sand. This climate possesses more tonic properties than the milder but more debilitating climates of Florida or any of the West India islands. It is also entirely free from the moisture of those places situated near or surrounded by salt water. Those who visit Aiken as invalids are frequently injured by not taking timely advice, either of their physician at home or of some one resident in this place, as to exercise, diet, and general hygienic management while here. They come here for the benefit of the pure, fresh, and invigorating air; and are apt to think they cannot have too much of it. Or else they may arrive when we are experiencing one of our cold, windy "spells of weather," and shut themselves in their rooms, stuff all the cracks with cotton, and with a rousing fire of Black Jack and light wood deceive themselves into the belief that they are doing the best they can to receive the full benefit of the climate; or else heap curses and maledictions on the climate and those whose advice they followed in

coming here. A little advice from an intelligent physician, who understands the climate and its effects, would save all this; and in many cases the life of the patient would be prolonged if a permanent cure was not effected.

The accommodations for invalids are for the most part first-class. With the hotel, the Sanitarium, and private boarding-houses, there are accommodations for about 400. Most of the private boarding houses are situated either in the centre of the town, or near enough to be of easy access.

Prof. Saml. Henry Dickson, M.D., of Jefferson Medical College, Philadelphia, a former resident of Charleston, says: "I have long regarded the town of Aiken, or rather the country immediately surrounding it, as among the most agreeable and healthy localities in our Atlantic States, so far as climate and topographical conditions are concerned. A sandy soil, and an atmosphere fragrant with the pleasant smell of the pines which form the prevailing growth for miles about, a genial, sunshiny sky, pure air, and limpid, sweet water constitute a set of circumstances highly favorable to the preservation of health to the sound, and its restoration to the invalid. The region is especially adapted as a winter and spring residence to those generally who suffer from affections of the respiratory organs from the most serious cases of consumption to the lighter but often tenacious attack of chronic catarrh and bronchitis. I have often been called on to give advice to patients laboring under these maladies and chronic affections as well of the digestive organ, and have found them in a majority of instances to be benefited by a residence in and near Aiken, both in winter and summer.

"Dr. Percival, a resident of Aiken, presented to the American Medical Association, at its meeting at Washington two years since, an account of this place of resort for Northern invalids which, however wrong it may seem, is really entirely truthful and without exaggeration." From an experience of one season at Aiken, I can bear witness to the truth of all this, although the last winter was one of unusual severity not only in Aiken but throughout the States, Florida not even excepted. This may and probably will not occur again in a number of years. Even last winter, the benefit received by those who were advised to be prudent, more than overbalanced the evil to the opposite class.

A great variety of vegetables are raised here in abundance, and can be procured fresh nearly the year through. The best of beef and mutton, from East Tennessee, can be procured, with but little trouble, at the markets in Augusta. Poultry and game are abundant. A great variety of fish can be had from Charleston and Augusta. Oranges from Florida. Apples from the North and West. Canned fruits are as cheap as in New York, and can be had in every variety. The material for food is abundant. There is no necessity for any one to go hungry or contract dyspepsia if he only hits upon the right place to indulge his gastronomic propensities.

"Female Pills" as Abortifacients.—The sum paid for these quack remedies in the United States is estimated by investigators at about one million of dollars. Dr. Ely Van De Warker, Syracuse, N. Y. (*Jour. Gynæcological Society*) believes the crime of abortion is more common in Protestant countries than in Catholic. Among the Roman Catholics the indiscreet maiden receives the crown of motherhood. She has been taught from childhood to bow before the reality of an unborn soul. To the Protestant woman of many sects such a reality cannot exist. The belief finds no place in her heart, that the embryo of coming manhood within her has roused pulses of love not unmarked in heaven.

Urinary Calculus in China.—According to J. G. Kerr, of Canton, China (*N. Y. Med. Journal*), stone in the bladder is confined almost entirely to the province of Canton; it is a remarkable fact that the disease is not known to exist only in the Southern portion of the Chinese Empire. Why the disease should be so common in the South of China, on latitude 23½°, and entirely absent in the central or northern parts, is a curious question, not easy to be answered satisfactorily.

The first operation for stone in the bladder performed in China was in 1844, by the Rev. P. Parker, M.D., the founder of the Medical Missionary Society, and now a resident of Washington, D.C. From that time to 1853 about 37 cases were operated on by him. Since the year 1856 lithotomy has been performed 187 times, with 19 deaths; the cases of lithotrity for the same period amount to 30, with 3 deaths. The ordinary lateral operation with the scalpel has been performed in most of the lithotomy cases. Generally the incision was not extensive, and reliance was placed on dilatation. In one or two cases the median operation was resorted to.

Sir Henry Thompson's lithotrite, made by Weis, was used in most of the lithotrity cases, and seemed to be as nearly perfect in its adaptations to the purpose required as it is possible for any instrument to be.

Thirty-seven of the lithotomy cases were operated on by Dr. F. Wong, a Chinese physician educated in Boston, Mass., and in Edinburgh. He is the only Chinese who has performed the operation.

Maltine.—This substance, called *diastase*, first reported by Payen and Persoz in 1833, is recommended in dyspepsia, either with or without pepsine, by Prof. De Renzi. The subjoined formula is laid down in *La Nuova Liguria Medicale:* ℞. Maltine, centigr. xv. F. pil. No. 3. One pill before each meal. ℞. Maltine, centigr. v. to x.; Pepsine, centigr., c. to cl. F. doses No. 2.

Stramonium an Antidote to Opium Poisoning.—In two cases, Dr. D. B. Putnam, of Boston, Mass. (*Boston Med. and Surg. Journal*), has used stramonium as an antidote to poisoning by opium, and from the promptness and certainty of effect manifested in these cases, he would suggest to others a trial of its virtues in cases of this character.

Medical Department of the University of Vienna.—This institution was founded in 1787, by the Emperor Francis Joseph II. It is of brick, two and a half stories high, and covers an area of ten acres or more. The number of wards is 110, and they contain 2,500 beds. There are 28 civil and 52 medical officers; all of whom receive pay. About 20,000 patients are admitted annually, besides those in the lying-in wards. From eight to ten thousand children are born in the obstetrical wards during the year. Bilroth and Dumeicher are the surgeons, Braun and Spät the obstetricians and gynæcologists, and Hebra and Neumann hold the chairs of dermatology. Sigmund and Zeisel lecture on syphilis, Jäger on the eye, and Rokitansky on pathological anatomy. Excellent as is the faculty and splendid the clinics, it is from the assistants that the most practical lessons are obtained. They teach everything. Prof. Braun is about fifty years of age, has a pleasing face, and is thoroughly German in appearance. He delivers his lectures sitting; speaks very slowly and distinctly, but with little animation, offering in this respect a striking contrast to the fiery

style of his assistant, Rokitansky, Jr., who bids fair in his chosen field to rival the reputation of his illustrious sire.—*Vienna Corresp. Am. Practitioner.*

Retention of a Wooden Pessary Seventeen Years.—Dr. J. J. Kempe, of Milwaukee (*Northwestern Med. and Surg. Journ.*), recently removed a ring-shaped pessary from a German woman, which was forcibly introduced, 17 years ago, by a physician in Germany for complete prolapsus uteri. The pessary, made of a wood similar to our hard maple, measured three and one-eighth inches in diameter, and the outer border was one-half inch in thickness. The instrument originally was covered with leather, which came away about eighteen months after introduction.

The patient had sought to obtain partial relief from her suffering by repeated and long-continued traction upon the pessary, and in this way an urethro-vaginal fistula was originated—by pressure of the tissues between the arch of the pubes and the outer border of the ring.

Bichloride of Methylene.—Samuel Theobald, M.D., of Baltimore, Md., London correspondent of the *Balt. Med. Journ.*, writes that the advantages of bichloride of methylene as an anæsthetic, have been largely tested at Moorfields Hospital, London. No dangerous or unpleasant symptoms caused by its administration have been noticed there. The advantages which it possesses over chloroform are, that it produces its effect much more rapidly, and is more evanescent in its action. These properties recommend it more especially for operations of short duration. In its administration, it should be diluted with a much smaller percentage of air than chloroform. To an adult from one or two drachms may be administered at once, and this will generally prove sufficient if the operation is of short duration. If desired, however, it may be repeated (four or five times), in drachm doses, as soon as its influence begins to pass off.

The Sphygmograph.—This is the title of a beautifully printed monograph of thirty pages, published by Wm. Wood & Co., and written by Edgar Holden, M.D., of Newark, N. J., in which the subjoined instruments devised to carry on his observations are particularly referred to, viz.: the sphygmograph already described in the Medical Record, an artificial heart and capillary apparatus made of rubber; a large sphygmograph two feet in length, adapted to record its workings.

The author announces that this essay, originally read before the Medical Society of New Jersey, is preparatory to a larger work on the practical value of the sphygmograph and the physiology of the circulation. The writer, after referring chiefly to tracings of the pulse in connection with cardiac pathology, says in closing: "With a new principle and a simpler and less costly instrument within reach, sphygmography will rise into a definite and useful science. Certain it is that by it, even now in its immaturity, we may detect deviations from perfect health not discernible by any other means, and consequently in at least one, and a growing interest in this country, namely, the estimation of possible longevity, it will be invaluable."

The attention and perusal of all interested in the workings of the sphygmograph is called to this useful book, which presents, in a form convenient for reference, the results of his own experience.

Transactions of the Medical Society of the State of North Carolina.—This pamphlet, containing the minutes of the eighteenth annual meeting of this Society, held at Raleigh, N. C., May, 1871, also exhibits creditable papers by the following gentlemen: "Report of a case of Scleroderma and two of Empyema," by Robert J. Hicks, M.D.; "Operation for Traumatic Aneurism of the Superficial Palmar Arch," "Craniotomy and Operation for Vesico-vaginal Fistula," by E. Burke Haywood, M.D., Raleigh. Dr. R. L. Payne, of Lexington, gives an interesting address on "Some of the duties of the worthy physician, and some of the obligations due the worthy physician by the community." The following officers were elected for the ensuing year: *President*, Dr. William G. Hill, Raleigh, N. C.; *Vice-Presidents*, Drs. H. W. Faison, R. J. Hicks, Gid. H. Macon, and W. A. B. Norcum; *Treasurer*, Dr. J. W. Jones, of Farborough; *Secretary*, Dr. James McKee, of Raleigh.

Artificial Milk.—Among the melancholy records of the siege of Paris may be counted those on the utilization of strange materials for food; not the least interesting of these being the researches of M. Boillott, M. Dubrunfant, and M. Charles Fua on "Alimentary Fats."

"Alimentary Fats" is a wide expression, including some rather unsavory hydrocarbons and very curious refuse materials. The main object of these investigations was to determine how such substances may be "usefully employed in alimentation," or, in plain, unsophisticated English, how to make butter from candle ends, dirty drippings, colza oil, fish oils, the refuse of slaughter-houses, the restored grease of the wool-dresser, etc. The general result has proved that the "frying process" is triumphant over its rivals; that by simply raising the temperature of the fat to 140° or 150° centigrade, and in the mean time cautiously sprinkling it with water, the cellular tissue, the volatile oils, the rancidity, offensive odors, and all other non-sentimental impediments to "alimentation" are removable.

This frying process has already effected something like a revolution in the industry of soap-boilers, some of whom have changed their trades to that of butter-fryers.

M. Dubrunfant is not content with superseding the cow in the matter of butter, but has made similar attemps upon milk. He contends that milk is simply an emulsion of neutral fatty matter in a slightly alkaline liquid, such as can be artifically imitated; and that the process of churning consists in hastening the lactic fermentation, thereby acidifying the serum of the milk, and at the same time agglomerating the fatty matter which the acidity sets free from its emulsion. He further controverts the cellular theory by showing that fat-globules of milk do not display any double refraction, as do all organized membranous tissues.

Having thus examined the theoretical constitution of milk, he proceeds to the practical method of imitating it, and gives the following directions: Add to half a litre of water forty or fifty grammes of saccharine material (cane sugar, glucose, or sugar of milk), twenty or thirty grammes of dry albumen (made from white of egg), and one or two grammes of sub-carbonate of soda. These are to be agitated with fifty or sixty grammes of olive oil, or other comestible fatty matter, until they form an emulsion. This may be done with either warm or cold water, but the temperature of 50° to 60° C. is recommended. The result is a pasty liquid, which, by further admixture with its own bulk of water, assumes the consistency and general appearance of milk.

Luxuriously-minded people, who prefer rich cream to ordinary milk, can obtain it by doubling the quantity of fatty matter, and substituting two or three grammes of gelatine for the dry albumen. The researches of Dumas and Fremy having reinstated gelatine among the nitro-

genous alimentary materials, M. Dubrunfant prefers it to albumen; it is cheaper, more easily obtained, and the slight viscidity which it gives to the liquid, materially assists the formation and maintenance of the emulsion. By substituting vegetable albumen for the white of egg or gelatine the vegetarian may prepare for himself a milk that will satisfy his uttermost aspirations.—*Nature.*

A New Quarterly has made its appearance in England, called "*The German Quarterly Magazine:* a Series of Popular Essays on Science, History, and Art." The first number contains three papers:—"The Cranial Affinities of Man and the Ape," by Rudolph Virchow; "Sight and the Visual Organs," by A. von Graefe; and "The circulation of the Waters on the Surface of the Earth," by H. W. Dove.

Conjoint Examining Board.—It is stated that all of the English Universities have accepted the draft scheme as proposed by the College of Physicians and the College of Surgeons, for a Conjoint Examination Board. There appears to be every probability of its soon being put into effect.

Louis Kossuth communicates to the *Neue Freie Presse* of Vienna the remarkable curative qualities possessed by a grotto near Pistoies, in the Valley of Lucques and Pisa, the virtues of which consist in radically curing the gout.

The treatment is easily followed, and lasts from eight to fifteen days.

The patient descends into the grotto, which is well lighted, covered with a bathing-gown. There he has only to sit and admire the stalactites, or converse with his friends. After ten minutes he sweats profusely, but not disagreeably.

After an hour he is taken out, wrapped in a flannel covering, and after reposing a little, subjected to a cold shower-bath.

The curative principle of the grotto is, however, an enigma.

In the warmest parts of the grotto the air does not show more than thirty-two to thirty-four degrees (centigrades), and is less oppressive than the air outside; the water is still colder, but it is heated by the air, the chemical composition of which resembles that of atmospheric air; the only difference being a slight addition of azote.

Kossuth attributes the remarkable qualities of the grotto to electro-magnetic agents.

The subterraneous grotto in question was discovered some years ago by a number of quarrymen engaged in excavating stone.

An Extremely Curious Pathological Fact, in the highest degree interesting to the scientific world, was signalled this week in Paris.

On the 6th of February M. Roux, sluice-keeper at the station on the Seine, opposite the mint, withdrew from the river the evidently lifeless form of a woman who had thrown herself in two hours previously, but who in spite of the most active measures, could not be discovered sooner.

The body laid upon the quai was cold and rigid, the face livid, the pulse of the poor woman had ceased to beat, and so sure were the bystanders she was dead that not the slightest effort was made to restore her to consciousness. On the arrival of the police commissary Dr. Jullien thought he still perceived some feeble indications of life in the apparently inanimate body.

On minute examination he found that, notwithstanding her long submersion beneath the Seine, the functions of life had not completely ceased.

Dr. Jullien in turn tried fumigations, frictions, and the breathing of air into her lungs. The beating of the heart, feeble and uncertain at first, gradually became stronger and more regular, until she finally became conscious, and could with safety be transported to the nearest hospital.

In falling into the Seine she had been seized with a syncope, which during the two hours of her immersion in the river had completely suspended the functions of life. Her name is Jeanne Dubois, and address, 52 Rue de Seine.

Monsieur Tellier has discovered a new method of preserving meat for an indefinite period of time, by submitting it to the action of methylic ether.

When once it is proven that meat thus treated, possessing intact its qualities of freshness, may be transported to Europe at little cost, in a frozen state, from Australia, South America, and the west and south of United States, the welfare of the masses in overstocked Europe will be greatly advanced; with the boundless resources of the New World at their disposal on easy terms, a new era will be opened to the working classes.

Swallowing a Fork.—An individual in Florence named Hegisto Cipriano, while imitating the tricks of Japanese jugglers, was seized with a fit of coughing, and had the misfortune to swallow the metal fork with which he was experimenting.

Conveyed to the hospital, the most experienced physicians there endeavored by every possible means to extract the fork from the stomach, but without success.

As he is able to eat and drink with the greatest freedom, and enjoys general good health, the medical men attending him are in hopes that the fork will be gradually digested, and that the result of the accident will not be fatal.

Home for Incurables, West Farms, N. Y.—The Fifth Annual Report of this Institution gives the following exhibit:—Whole number of patients under the care of C. F. Rodenstein, M.D., the *attending physician*, during the year ending June 1st, 1871, 57; number in house at last report, 35; admitted during the year, 22; died, 9; removed, 5; now under treatment, 43. *Classification of diseases.*—Hemiplegia, 13 cases; debility, 6; dementia, 4; epilepsy, 5; progressive locomotor ataxy, 3; phthisis pulmonalis, 4; paraplegia, 2; rheumatic gout, 4; and softening of the brain, 2. The remaining 12 cases represent as many different diseases. The annual meeting of the Society was held at Association Hall, New York City, June 12, 1871, and appropriate addresses were made by Chancellor Crosby, Rev. Noah H. Schenck, D.D., Rev. S. H. Tyng, Jr., and Hon. Erastus Brooks. Contributions are solicited, which may be sent to J. D. Vermilye, *Treasurer*, Merchants' National Bank, 42 Wall street, N. Y. City.

The Photometer.—A newly-invented photometer proves that light penetrates 100 fathoms below the surface of the sea—70 fathoms more than hitherto supposed.

A Centenarian.—The most remarkable centenarian alive is probably Thomas Fitzgerald, of Rhinebeck, N. Y., who is one hundred and eight years old. He lives with one son, while his wife, one hundred years old, lives with another at Rondout and keeps house for him. Mr. Fitzgerald uses tobacco, but has always been strictly temperate. He is very deaf, but his eyesight is good, and he can thread a needle at arm's length. He strops his razor, shaves himself, dresses and

undresses, and within the year has chopped and put up six cords of wood. His occupation has been that of a fisherman and laborer. He is a native of Ireland, and was thirty-four years of age at the time of the Irish rebellion in 1798.

Berardius Arunxii.—A unique specimen of the rare animal, *Berardius Arunxii*, of Duverney, 30 feet in length, has been recently given to the Hunterian Museum, by Mr. Erasmus Wilson. Only four of these creatures have been discovered, all on the coasts of New Zealand.

Death from Hypodermic Injection of Morphia.—Dr. Stanton, of New Brighton ,Pa., relative of the late Secretary Stanton, and Auditor-General of the State of Pennsylvania, lately died from the effects of an hypodermic injection of morphia, administered by himself to produce sleep, in the inner part of the arm near its junction with the shoulder. The dose was about one grain. Death occurred six hours after its administration. In the opinion of those physicians who witnessed the death scene, his death was caused by the unusually prompt and complete absorption of the morphia, prostrating a system already struggling with cadaveric poisoning.

Scarlet Fever in Great Britain.—During the last sixteen years the losses from scarlet fever in Great Britain were not less than 100,000 lives.

Chloride of Sodium.—In the year 1871 nine million bushels of common salt were manufactured in the neighborhood of Syracuse, New York.

Analysis of Milk.—Dr. P. Schweitzer, of the School of Mines in Columbia College, New York (*Journ. Applied Chemistry*), in his examination of the milk furnished to the inhabitants of this city, reports that in no samples were any injurious ingredients found, the only adulteration being water.

The specific gravity of pure milk adopted by the English is 1.029; it should contain from 12½ to 13 per cent. solid constituents, the rest being water. The solid portions are made up of

	Ordinary Milk.	Condensed Milk.
Ash	0.70	2.60
Butter	3.80	13.12
Casein	4.10	14.44
Sugar	4.20	16.30
	12.80	46.46

New York State Lunatic Asylum, Utica.—In a voluminous paper on "Materialism in its Relations to the Causes, Conditions, and Treatment of Insanity," read before the Association of Superintendents of Insane Asylums, at Toronto, by H. B. Wilbur, M.D., Sup't of the New York Asylum for Idiots (*Journ. of Psychological Medicine*), the statistics of the Utica Asylum for 27 years ending Nov. 30, 1869, are cited to show that the percentage of recoveries, during the later years, has not been an increasing one. He would not be understood as presenting them to prove that they are less favorable than in the case of other institutions during the same period, but as showing that the modern system of treatment, based upon the exclusively "physical basis" theory of insanity, is no more successful than in former times, though it must be conceded that the resources in the way of remedial agencies have been greatly enlarged.

The partial statistics of three Massachusetts institutions, he believes, indicate that the medical treatment, when pushed, is no more successful than when less vigorous medication is employed.

According to this author, in the last six years, the average annual cost of medicines, for each patient, at the Utica Asylum, has been $7.94. In the six years of Dr. Brigham's administration, when the moral treatment was made very prominent, he states that the average annual cost of medicine and medical supplies for each patient was $1.15.

The Man with the Iron Jaw.—Mons. D'Atalie, or, as he is commonly known, "The Man with the Iron Jaw," was presented recently at the surgical clinic of Professor Mears, in the Penn. College of Dental Surgery, for an examination of his maxillary apparatus. From early life he has been engaged in a gymnasium. His first effort to raise weights, grasped by his teeth, was made three years ago, when he made an attempt to lift a heavy table. This effort was successful, and now he is able to raise seven hundred pounds. His maxillary apparatus does not present any extraordinary development; on the contrary, there seems to be an absence of any very full development of the various parts which enter into its formation.

Mons. D'Atalie holds heavy weights by placing the part seized between both the anterior and posterior teeth, so as to employ all the elevators of the jaw. His power does not reside alone in the muscles of the jaw —those of the neck and body play an equally important part in all of his feats of strength.—*Dental Times.*

Proceedings of the State Medical Association of Arkansas.—The second annual session of this Society was held at Little Rock, Arkansas, November 5th and 6th, 1871. The annual address was delivered by the *President*, Dr. P. O. Hooper. Interesting communications were read by Drs. R. G. Jennings, W. H. Hawkins, E. R. Du Val, and Geo. W. Lawrence. Nine local medical societies, representing fifty members, compose the parent society. The following officers were elected for 1872: *President*, J. M. Holcombe, of Pine Bluff; *Vice-Presidents*, Drs. O. A. Hobson, J. F. Davies, and W. W. Bailey; *Recording Secretaries*, Drs. E. V. Deuell and Ed. Cross, of Little Rock; *Corresponding Secretary*, Dr. Claiborne Watkins, of Little Rock; *Treasurer*, Dr. J. B. Bond, of Little Rock.

Chinese Surgery.—John G. Kerr, M.D., Chief-Surgeon of the Canton (China) Hospital (*Cin. Lancet and Observer*), writes that the department of surgery in this empire can scarcely be said to exist, beyond the application of caustics and plasters to tumors and ulcers, and of poultices to broken bones. They are entirely helpless. There is no native doctor in all China who can give aid in any case of accident or disease which requires manual or instrumental interference. The inestimable benefits of operative surgery in all its branches are unknown to them, except so far as they have been derived from a few foreign physicians and the pupils instructed by them. They are entirely without surgical instruments, and all the apparatus which modern ingenuity has applied to the relief of injuries, deformities, and disease. In the instruction of students there, by foreign medical men, there is a want of suitable textbooks in the Chinese language. A beginning was made in this department some years ago by Dr. Hobson, of the London Missionary Society, who published the outlines of several branches of medicine in four volumes. He inquires: Are there not many of those who are aspiring to the honors of the medical profession, who will be ambitious thus to benefit so large a portion of the human family?

The Drug Trade of Chicago and the Fire.—Of the 160 retailers of drugs in Chicago, upwards of fifty, or more than one-third of the whole number, lost their all in the wide-spread desolation. The sum-total did not fall short of $400,000. Before the fire, the gross sales of the leading wholesale druggists amounted to $5,000,000 annually. Of the six wholesale druggists who were entirely burned out, five have resumed business and are transacting business with their usual despatch.

A Very Old Man.—Harvey Thacker, who died recently in California, was one hundred and twenty-eight years old at the date of death. He was the son-in-law of the famous Daniel Boone, the first settler in Kentucky.

A Gift to the Kentucky Public Library.—Dr. Christopher Graham, one of the oldest and most esteemed citizens of Kentucky, has presented to the public library of that State his collection of minerals, fossils, and geological specimens, valued at $30,000, the work of fifty years.

The Largest Consulting Practice in the World.—Dr. Gull, of Guy's Hospital, London, is said to have the largest consulting practice of any physician in the world—worth not less than £25,000 a year ($125,000).

Longevity of Farmers.—According to Dr. Nathan Allen, of Mass., in his registration report of deaths in that State for thirty years, the cultivators of the earth stand as a class at the head, reaching, on an average, the age of nearly 65 years.

Value of Salt.—In Africa the high-caste children suck rock-salt as if it were sugar, although the poorer classes of natives cannot indulge their palates. Hence the expression in vogue amongst them, "He eats salt with his victuals," signifying that the person alluded to is an opulent man. In those countries where mineral salt is not procurable, and where the inhabitants are far removed from the sea, a kind of saline powder is prepared from certain vegetable products to serve in its stead. Indeed, so highly is salt valued in some places, that from its very scarcity it is employed as a substitute for money.—*Food Journal.*

Nationalities Relieved in Chicago, Ill.—We learn from the First Special Report of the Chicago Relief and Aid Society, that the sufferers by the fire were of all nationalities; and of 18,478 families who needed succor, 1,965 only were of native birth. The number of Irish families was 5,512; German, 7,280; Scandinavian, 2,104; English, 599; Scotch, 195; French, 185; Italian, 112; Bohemian, 208; African, 241; Canadian, 94; Polish, 90. Ten other nationalities were represented. Up to Nov. 30, 1871, only one death occurred among a population of 5,000 in barracks.

The Treasurer, Geo. M. Pullman, reports the receipt of $2,485,884.55 up to November 18th, inclusive—of which $495,460.36 had been judiciously distributed, leaving a balance in sixteen different banks of $1,190,424.19, drawing five per cent. interest. The officers of this Society, incorporated February 16, 1857, are men of high standing, and are entitled to the confidence of the community. Since this Report was written we learn that the amount received up to January 6th, was $3-335,700. The balance on February 3d was $1,314,629.

The Roosevelt Hospital, New York.—The Trustees of this new Institution have published the learned address by Thomas E. Vermilye, D.D., LL.D., made at its opening, Nov. 2, 1871—with opening address by Edward Delafield, M.D., the President. Interesting statistics are given, in which he mentions that physicians and surgeons were first established in Infirmaries in 1437. The Knights of St. John opened a hospital for sick pilgrims at Jerusalem in 1048, and were styled Knights Hospitallers. There were hospitals for the sick at Constantinople in the eleventh century. They sprang then from the bosom of Christianity.

Death of Dr. Bulkley.—*Resolved*, That in the death of Dr. Henry D. Bulkley, the Medical Board of the Nursery and Child's Hospital have to deplore the loss of one of the earliest officers of the institution—a member of its consulting staff since its organization.

Resolved, That the close of his long life of usefulness is covered with honor, and that his memory will be cherished by his former colleagues in this Board, in common with all who were associated with him, knowing the inestimable worth of his private life, and the eminent skill and spotless integrity of his professional career.

Resolved, That a copy of these resolutions be sent to the family of the deceased, to whom we tender our warmest sympathy, and that they be published in the medical journals of this city.

T. M. Markoe, M.D., }
J. J. Hull, M.D., } *Committee.*

Small-pox.—The cases of small-pox in this city average the same—from seventy-five to eighty weekly. In Philadelphia the number is somewhat decreased, as is also the case in Boston and Chicago. The large towns throughout the State are beginning to develop the disease. Especially is this the case along the lines of our railroads.

Academy of Medicine of Paris.—On account of the deaths of Drs. Poiseville, Fabret, Danyau, Leblanc, and Blache, five vacancies exist in the various sections of the Paris Academy of Medicine.

Professor Huxley.—This distinguished savant will absent himself from England for the next two or three months—his health having given way. He will reside during this time in Egypt.

King's College, London.—Dr. Priestley, of this London medical college, has resigned the professorship of obstetric medicine and physician for diseases of women. He has lectured on widwifery for the last fifteen years in this institution.

Deaths of London Practitioners.—Robert Wade, F.R.C.S., who has left important papers and works on stricture of the urethra, recently was seized with a fit of paralysis, and died shortly afterwards.

Dr. J. Charles Hunter, L.R.C.P., formerly an inspector of vaccinators to the National Vaccine Institution, died December 19, 1871, æt. 72.

Rush Medical College, Chicago.—At the twenty-ninth annual commencement of this college—held January 17, 1872—there were seventy-seven graduates.

A New Monthly Medical Journal, called *L'Union Médicale du Canada*, has made its appearance in Montreal, edited by J. P. Rottot, M.D., with A. Dagenais, M.D., and L. J. P. Desrosiers, M.D., as assistants, and contains about fifty pages of the matter usually found in journals of that size; the principal article in the first number being devoted to a discussion of "The New Medical Bill," and of the question of "Medical Reform."

Original Communications.

TWO CASES, ILLUSTRATING THE PRODUCTION OF VOWEL AND CONSONANT SOUNDS.

By Prof. E. M. MOORE, M.D.,

ROCHESTER, N. Y.

The function of voice has always been a theme of interest to a wider circle of men than physicians. The most profound students of language, those who push their inquiries into the phonetic forms of the dim past, seeking to unravel the net of history in the twilight of the race, are perhaps more interested than any other class, except the pure physiologist. The students of Sanskrit have brought forward elaborate and excellent treatises upon phonation, written more than three thousand years ago, pushing the inquiry as far and as accurately as mere observation could go. Since the discovery of the laryngoscope the whole subject has undergone and is now undergoing a complete revision by the practice of auto-laryngoscopy, and we shall undoubtedly have the whole topic vastly advanced. Indeed it may be so far as to enable us successfully to initiate an inquiry into an anatomical explanation of certain phonetic laws which some profound German scholars have propounded, and also lead to the discovery of others. These men look to the physiologists, in hopes that a law of anatomical and physiological relation to sounds may be discovered, upon which to rest a solid foundation for the expansion of ethnology and comparative philology.

The unanimity of opinion among physiologists, who have given their attention to the function of the larynx in the production of the voice, has led me to note two cases of striking interest, and so conclusive in their character that I think they will be regarded as an offset to the experiments and observations that have heretofore been made, and upon which opinion has rested. They have the merit of substituting fact for inference, and, indeed, fact bearing the potency of an experimentum crucis. In order, however, to the full understanding of the question, I will take Carpenter as the authority for the standard opinions, and recite his view on the subject at the point I propose to elucidate.

The doctrine of the reed-sound in the production of the laryngeal voice, it seems to me, is firmly settled and universally admitted; the proof resting not only upon the form of the organ, but on the production of sound from the artificial larynx. Here at the vocal chords, the body of sound known as the sonant voice, in contradistinction to the whisper, is undoubtedly made. But the especial point to which this paper is directed is not this, but to the correction of opinion with reference to the production of vowel-sounds. These are asseverated to result from the passage of air along the mouth, and to be the effect of its modification, including, of course, the pharynx and nose as factors. In proof of this I quote Carpenter.

"The vowel-sounds are continuous tones modified by the form of the aperture through which they pass out; while in sounding consonants the breath suffers a more or less complete interruption in its passage through parts anterior to the larynx. Hence the really simple vowel-sounds are capable of prolongation during any time that breath can sustain them. This is not the case, however, with the real diphthongal sounds (of which it will presently appear that the English *i* is one), whilst it is true of some consonants. It seems to have been forgotten by many who have written on this subject, that the laryngeal voice is not essential to the formation of either vowels or consonants; for all may be sounded in a whisper. It is evident, therefore, that the larynx is not primarily concerned in their production, and this has been fully established."

Again he says: "That the vowel-sounds are produced by simple modifications in the form of the external passages is easily proved, both by observation and imitative experiment. When the mouth is opened wide, the tongue depressed, and the velum palati elevated, so as to give the freest possible exit to the voice, the vowel *a* in its broadest form (*ah*) is sounded. On the other hand, if the oral aperture be contracted, the tongue being still depressed, the sound *oo*, the continental *u*, is produced. If attention be paid to the state of the buccal cavity during the pronunciation of the different vowel-sounds, it will be found to undergo a great variety of modifications, arising from varieties of position of the tongue, the cheeks, the lips, and the velum palati. The position of the tongue is, indeed, one of the primary conditions of the variation of the sounds, for it may be easily ascertained that, by peculiar inflections of this organ, a great diversity of vowel-sounds may be produced; the other parts remaining the same. Still there is a certain position of all the parts which is most favorable to the formation of each of these sounds; but this could not be expressed without a lengthened description. The following table, slightly altered from that of Kempelen, expresses the relative dimensions of the *buccal cavity* and of the *oral orifice*, for some of the principal of these—the number 5 expressing the largest size, and the others in like proportion:—

Vowel sounds.	Oral opening.	Size of Buccal cavity.
a as in ah	5	5
a " name	4	2
e " theme	3	1
o " cold	2	4
oo " cool	1	5

"These are the sounds of the five vowels, *a*, *e*, *i*, *o*, *u*, in most continental languages; and it cannot but be admitted that the arrangement is a much more natural one than that of our own vowel-series." Having made this quotation, I proceed at once to give the first case, bearing directly on this point:—

Edward Larkin, æt. 56, born in Ireland, April 14, 1871, attempted suicide with a razor. A cut was made immediately above the thyroid cartilage, extending an inch each side of the median line horizontally, and shaving off the epiglottis at its base. The muscles below and above, by their tonic power, soon made an oval opening, two inches by ¾ of an inch. Swallowing became impossible. On the fourth day he was brought to St. Mary's Hospital, having taken no food. No attempt was made to bring the edges together, trusting to the granulating process. A tube, introduced through the opening into the œsophagus, conveyed food to the stomach. This process was continued for about five weeks, when swallowing became possible, although the opening, which had become nearly circular, was about half an inch in diameter. At the present time (June 10, 1871) he swallows solid food, but part of the liquid food will run out of the opening. At any time he was able to talk by bending his head forward and temporarily closing the opening. When the head was thrown back, he immediately lost this power.

The experiment of enunciation of the alphabetical sounds, with the head thrown back, was made with the vowels first. The four sounds of *a* as in *all*, *arm*, *age*,

at, were at once distinctly rendered. *E*, next attempted, always resulted in *a* as in *age*. (This, I think, must be put to the account of the Hibernian larynx.)

I is a diphthong, and was clearly rendered.

O, both long and short, was well brought out as in *note* and *not*. The short *u* as in *cut*, and represented by nearly all the other vowels, was also well pronounced.

Y as *I*.

The diphthongs were more difficult, and some could not be uttered; *ou* as in *our* was pretty well pronounced; *oo*, a pure vowel, was uniformly rendered as *o* in *note*.

Oi, as in *noise*, could scarcely be distinguished.

The alphabet, taken in order, resulted in the enunciation of the vowel element. Thus our letter *B* was pronounced *a*, as also *C* and *D*. There was absolutely no consonant uttered. The breathing, which is represented by the letter *H*, was perfectly rendered. It was clear and smooth, and when joined to a vowel was spoken loudly and clearly. Thus, *Ha* and other sounds of *a*, *Hi* and *Ho*, also *Hu short*, were pronounced with ease. *K* and *G* are considered guttural aspirates. Any attempt to produce them resulted in the pure aspirate.

These experiments were repeated on two different occasions, a few days apart, and with the same results. But on the second trial it was suggested that some air might pass into the mouth, and a curtain of buckskin was fitted to the upper part of the aperture, thus cutting off all the air that might reach the mouth. The result was the same.

As regards the finish of the tones called vowels, there was clearly a defect. This might be due to the thickening of the mucous membrane, incident to the inflammation in its immediate neighborhood—a good and quite sufficient cause. Or it might be explained by the absence of the modification by the mouth, tongue, and other parts, which have been supposed to create the sounds, but which, as is here shown, can only polish and complete what has been begun. But a little practice will enable one to hold the parts above the larynx perfectly quiet, and still produce the vowel-sound. This case is so pathognomonic, if I can apply such a term, that it must reverse and settle opinion upon the seat of certain vowel-sounds.

The number of sounds that Larkin was able to enunciate is limited; but I will now cite another case that, from its peculiar character, supplements the one just detailed, and by its results confirms the belief that Larkin's ability to enunciate as described would exist in all others, thus placing the seat of such vocalization as normal in all.

During the year 1856 I was called into Orleans Co. to see Edward Matthews, who was suffering from urgent dyspnœa. I arrived at his house in the night, and at once opened the crico-thyroid space. The relief was sufficient, and I did not see him again for a long time. Two years after, as I am informed, a piece of bone was removed from the opening, which had been kept free by a tube. This seemed to be lodged in the larynx somewhere, but the statement is too indefinite to be thoroughly understood. Nevertheless, there was a great abatement of unpleasant symptoms from soreness and dyspnœa. But slowly and gradually the glottis became closed, and for more than ten years a cicatrix has cut off the air from the trachea into the mouth, the closure being at the base of the larynx and absolute, not the least air passing through. Mr. Matthews, who is now forty-four years of age, is a man of intelligence, and has made great and constant efforts to enunciate clearly, and has improved much of latter years. Of course, every sound is a whisper, and also short, for the air is driven by the buccinators and the muscles of the tongue and the supply of air is small. From this man we would expect to hear the consonants, if he could speak at all, and this is essentially true.

R and *L* he cannot pronounce, as they require a continuous tone, and are interested in a quiescent state of the buccinators, which are the chief means of forcing the air out. But even these sounds can be faintly traced in combination with others, in the construction of a word. The pure breathing represented by the letter *H* cannot be made at all, or in any combination. The single vowel-sounds of *a*, as in *arm*, *at*, *all*, and *age*, cannot be rendered at all. A blowing sound was the result of the effort, and when the finger was placed over the aperture in the trachea there was absolute silence. The cerebral command was obviously to the larynx. *O* was also silent, or resulting in *oo*, as in *ooze*. *I*, as in *isle*, was also silent when the aperture was closed, or a mere blowing sound if opened. *E* clearly enunciated, and this vowel is made in the front part of the mouth, by throwing the tip of the tongue against the lower incisors and curling it upwards. While fixed, the continuous tone *E* results.

The nameless vowel represented by *u* as in *nut*, *e* as in *err*, *i* as in *sir*, and *o* as in *honor*, sometimes styled the unvocal, could not be uttered except in connection with consonants.

Short *o* as in *not*,
" *e* " *net*,
" *i* " *nit*,

could be rendered in conjunction with consonants, but, with the exception of short *e*, could not be rendered individually. The diphthongs were much more successfully pronounced than by Larkin.

Thus the soft *u* as in *gratitude* is a diphthong composed of *e u* (*oo*) and was rendered beautifully.

Oo is really a very pure vowel, perhaps the most of any, if we except *e*, but it is not so placed in our catalogues, and I can hardly understand why, unless it happens to be represented by a double character. This is made at the lips exclusively, as in *ooze*, and was rendered with great perfection.

Oi as in *noise*, and *ou* as in *our*, both failed.

As might be expected, the consonants are generally pronounced, most of them individually, but some only in connection with vowels.

B, C, D, F, G, K, P, T, X, Z, and V, pronounced as words and pure. But H not all. L and R very faint, when combined with *e* long.

M and N in connection with vowels only.

The consonants, P and T, made in the front part of the mouth, were more easily managed than the others. Accordingly the vowels within his capacity were sure to be brought out best between them. Thus:—

Pet	Pretty well.
Pit	" "
Pot	" "
Put	" "
Peet	Admirably.
Pout	Not at all.
Peut	Beautifully.

Pat as *Put* or *Pot*.

Pate, not at all, or as *Peet*.

Th, as in Thing and With	Well.
Ch, as in Church, and Sh, as in Shall	Well.
Nt, as in *Sent*	Well.

The conclusions that I arrive at from these two striking cases are these:—

1st. That the larynx is not only the generator of voice (so called), but the actual seat of vocalization for the vowels *a*, in all its forms, *i* long, *o* long, and the pure aspirate. Also the short vowels, which are also explosive, as *i* in *sit*, *o* in *not*, and nameless one or unvocal.

2d. That these sounds receive a finish in the pharynx, nose, and mouth; with the exception of the pure breathing and the short vowels.

3d. The consonants are all made above the larynx.

4th. The vowel *e* long is made purely in the front part of the mouth, also the vowel *oo* and the diphthong *eu*, which is composed of these two elements.

5th. The short vowels (*e* in *met*) (*i* in *sit*) (*u* in *nut*) (*o* in *not*) can be made in the front part of the mouth.

6th. The unvocal can probably be made in several places from the larynx to the front of the mouth.

These propositions are nearly all mere statements of facts, but some are inferences.

The observations on Edward Larkin were made in the presence of my colleagues Drs. Casey and Carroll of St. Mary's Hospital, and also of Prof. Lattimore of the Rochester University. They were repeated on two occasions, a few days apart, but became after a short time impossible from closure.

Those on Mr. Matthews have been repeated on three occasions, within the last three months: on one in the presence of my colleagues in the Buffalo Medical College and several physicians and students of medicine, and on another, in the presence of Prof. Mixer of the Rochester University, and Prof. Palmer of the Normal School at Brockport—two gentlemen whose interest in the case arose from the fact that they were the teachers of languages in their respective institutions. Doubtful sounds have been carefully excluded, and I feel sure that no observations have been retained which are not clear and decided beyond cavil.

CASES OF CEREBRO-SPINAL MENINGITIS.

By JOHN DWYER, M.D.,

RESIDENT SURGEON NEW YORK STATE EMIGRANTS' HOSPITAL, WARD'S ISLAND, N. Y.

The following notes of six cases, typical of thirty cases of cerebro-spinal meningitis, treated in the Emigrants' Hospital during the years 1870 and 1871, may be of interest in connection with an inquiry made at a late meeting of the County Medical Society, "Whether any member had at present a case of cerebro-spinal meningitis under observation?"

Case 1.—Mary McG., aged 16, previously a strong healthy girl, living in a private residence on the Island, was rather suddenly attacked on 9th February, 1871, with a chill and headache which increased during the night; first saw her at 11 A.M. on the 10th, and found her shivering, complaining of acute pain in right frontal region, also in the lumbar region; she was vomiting freely a yellowish-white matter. At 6 P.M. she was visibly worse, although vomiting had ceased and a solution of quinine was retained in her stomach; complained of intense pain in forehead and occiput, neck arched backwards, surface and extremities cold. She was screaming out for relief, had a wild look in the eyes, and she rolled restlessly about the bed, striking her head against the pillow. She was partly delirious. At 8 P.M. the right pupil was insensible to light, right foot and hand slightly convulsed. She suddenly began to sink, and died comatose a little after midnight, about thirty-six hours from the attack. No post-mortem could be obtained.

Case 2.—Peter Samelsen, aged 32, engaged in outdoor work, suddenly attacked on 13th February, four days after case No. 1, with chills, prostration, and intense headache; did not speak after admission to hospital, moaned heavily, head and neck bent stiffly backwards, vomited freely; died comatose 36 hours after admission. Post-mortem revealed acute meningitis and profuse serous effusion of the arachnoid on the upper anterior surface of the right hemisphere of the encephalon. The lungs were œdematous and the spleen enlarged.

Case 3.—Pelagius Cremer, aged 39, engaged in outdoor work, attacked on same day and in same manner as preceding case; died in thirty hours. Post-mortem—acute general meningitis, not marked in one locality as in case No. 2; other organs healthy, except a very much enlarged spleen. It was reported that this man had repeatedly suffered from intermittent fever.

Case 4.—Charles Grever, aged 24, in hospital with periostitis of tibia, suddenly attacked with chills and headache on 12th March, 1871; vomited freely yellowish matters; skin cold, pulse not extraordinary. Quinine was given which was retained, and seemed to restrain the vomiting. Under the influence of chloral he dozed through the night, occasionally waking up, moaning and tossing about restlessly in bed. On the 13th he was worse, complained of terrible pain in forehead, neck, and back; the muscles of abdomen became rigidly tetanic, and opisthotonos set in. The skin was mottled darkly, and there was an indistinctly marked purpuric appearance; he had a slight convulsion, and passed urine and fæces in bed; he slept occasionally, raved and breathed stertorously, frothing at the mouth. Commenced to sink early on the 14th, and died forty-seven hours from attack. Post-mortem: Calvarium unusually thin, dura mater much congested; on detaching dura mater the whole surface of encephalon was bathed in bloody serum floating small jelly-like particles of lymph; the pons varolii and medulla oblongata were profusely charged with serous effusion; other organs healthy.

Case 5.—Recovery. Patrick S., aged 10, residing in a detached house near the farm. Deep excavations for buildings have been going on in the immediate vicinity. He was suddenly attacked, on February 12, 1871, with headache, chills, and vomiting, as in preceding cases. On the 13th his breast and face mottled darkly, but not spotted; abdominal muscles rigid, neck and spine bent backwards, herpetic eruption on face and lips; this child suffered great pain and was delirious at intervals, rolling about uneasily in bed, and stretching out his arms rigidly. About the tenth day the right eye became inflamed, and an opaque effusion appeared in the anterior chamber. The pupil was kept well diluted with atropine, but seemed insensible to light; he was also a little deaf. The effusion daily became more opaque and solid; the boy suffered severely, continually complaining of his head; but fighting through all the phases of the disease, he began to improve about the sixth week, but was unable to leave his bed before the expiration of the ninth week. The herpetic eruption and the effusion in sheath of the optic nerve left no doubt of this being a true case of cerebro-spinal meningitis.

He still resides on the island, and his condition at present, one year since his sickness, is as follows: Right eye atrophic, vision completely lost, anterior synechia, pupillary space contracted, and filled up with a lymphic white deposit; partial but apparently permanent paralysis of right side, throws out the right foot and hand with an uncertain motion; occasionally complains of headache; hearing not good.

Case 6.—Recovery. Teresa S., aged 4, sister of case No. 5, attacked on Feb. 23, eleven days after, and in the same manner as her brother; opisthotonos existed to a degree, swallowed with difficulty; suffered severely with headache, and moaned incessantly; shrieked when her neck or occiput was touched; when lifted by her mother she continued rigidly bent back-

wards; the tongue always kept dry and chippy; the lips and face also spotted with herpes; she was for some time deaf while sick, but the eye did not suffer. Although this child was an aggravated case, she recovered three weeks before her brother, and she now shows no evidence of any cerebral lesion, being apparently quite healthy.

During 1870 only four cases of cerebro-spinal meningitis occurred in the hospital, all resulting in death. Shortest duration of disease three days.

During 1871 there were 26 cases treated, of which 14 died: 1 died in eighteen hours from attack; 5 died within two days, 3 within ten days, 1 within thirteen days, and 4 exceeded this up to eight weeks, the remaining 12 becoming chronic, made a protracted recovery.

In the month of January, 1872, already two fatal cases have occurred: one died in twenty-two hours, and the other in eight days.

There was no peculiarity to be observed in the ages of those attacked; the majority were adults, four were under ten years of age.

Of the whole, only four were females. Winter or summer did not seem to make any difference, the cases in each season being about equally divided, except that in February, 1871, five cases occurred within a few days of each other.

With the exception of cases 5 and 6, there was little or no communication between the parties attacked, the cases were scattered through the different buildings of the institution.

Strict attention is paid to the sanitary condition of the whole institution, Hospital and Refuge, and no local cause could be discovered as the exciting one, unless the turning up of fresh ground for the buildings in progress might indicate its malarious character.

A NEW METHOD OF REDUCING A DISLOCATION OF THE HUMERUS INTO THE AXILLA, WITH REFERENCE TO THE ANATOMY OF THE SHOULDER-JOINT.

By E. P. BENNETT, M.D.,

DANBURY, CONN.

In the early part of my professional life, being often called upon to reduce this very common dislocation, I often experienced great difficulty in accomplishing my object, and when I did succeed I often found irreparable injury had been done to the structure of the joint, and the patient more or less crippled. I carefully studied all my surgical works, and carefully examined and tried all of the various methods by them advised for the reduction of this injury, and finally came to the conclusion that they were all radically defective, as they did not take into consideration the anatomical structure of the joint. It is needless for me to detail these various methods, as they are familiar to all, and, as I said before, they are all unscientific and defective. It does seem as if in most of them the efforts of the surgeon and of his assistants were designed more to tear the scapula from its attachments to the chest, and the muscles from their attachments to the humerus, than to replace the displaced bone. Since I have adopted my method, which I call the anatomical method, and which, egotistic as it may appear, I claim as exclusively my own, I have never failed in a single instance of reducing this dislocation by the tractive force of one hand, and this after all the other methods had been tried and failed, and when the united strength of ten or twelve men had been exerted to their utmost. Now for my plan:

I place the patient upon a common chair. I pass around his body, below the arms, a broad strong towel, the ends of which I give to a stout assistant. The next step, and the most important of all, is to firmly fix the scapula. Without this precaution you will be pretty sure to fail, pull as hard and as long as you please. To fix the scapula I direct one intelligent assistant to place the ball of the hand firmly against the acromion process. I then tie a handkerchief around the arm directly above the condyles, and make in it a loop for my right hand, then, with the arm hanging down closely to the body, I pull gently and steadily directly downwards, and, with my left hand in the axilla, the bone slips easily and quickly into place. Now in this dislocation the head of the bone lies under and in contact with the neck of the scapula, and if by any means you can depress the head of the bone to the extent of one-eighth of an inch, or even less, there is nothing to prevent your gliding the bone easily into place, and that, too, without injuring any of the joint structures. I have said that I claim this method as exclusively my own. If it has ever been practised or recommended by others, I have failed to see it.

THE "ARTERY CONSTRICTOR," WITH CASES.

By S. FLEET SPEIR, M.D.,

BROOKLYN, N. Y.

(Read before the Medical Library and Journal Association, N. Y.)

"CONSTRICTION" OF THE ANTERIOR TIBIAL AND INTERNAL PLANTAR ARTERIES.

Case I. This is the only case in which there has been any accident after the application of the artery constrictor, under my observation; and as a faithful record requires the whole truth to be told, I am glad I have nothing worse to report.

On the 28th of December, 1870, at the Brooklyn City Hospital, Dr. D. E. Kissam, performed amputation at the ankle-joint, on a woman aged 30 years, for extensive disease of the bones of the foot. The patient was etherized, and Pirigoff's operation performed. At the invitation of Dr. Kissam, I closed the anterior tibial artery with the constrictor. This was the only artery which bled at the time of the operation, and it was supposed that the other arteries had been closed by the previous disease and inflammation; however, the internal plantar artery looking larger than usual, it was thought best to apply the constrictor to it also; which was done before closing the wound. In coaptating the flaps, it was found that considerable force was necessary to overcome the resistance of the muscle, and adjust the portion of the os calcis (which is left, in this operation), to the ends of the tibia and fibula. In doing this, Dr. Kissam pressed very violently upon the anterior tibial artery, at the point where it had just been constricted, and repeated this pressure several times before he was able to adjust the bones. Notwithstanding which, there was no bleeding from the artery. I was in some doubt as to the propriety of leaving the vessel in this condition without reapplying the constrictor, in order to replace the invagination of the internal and middle coats, which it seemed to me must have been turned back, and perhaps the clot dislodged by this violence; however, as there was no bleeding from the vessel, and all present appearing satisfied with the security of the artery, it was left as

it was, and the wound was closed by silver sutures, one of which was passed, as it seemed to me, right through the anterior tibial artery (an accident which might very easily occur, as there was no guide to the artery), and my anxiety for the integrity of the vessel was again aroused; still, no bleeding following, the stump was bandaged, and the patient put to bed.

At 8 P.M. the same night there was bleeding from the stump. Dr. Hamilton, the House Surgeon, found it necessary, in order to arrest the hemorrhage, to open the wound. He found the anterior tibial, which had been constricted, bleeding; he tied this vessel back of the constriction. This, however, did not arrest the bleeding, and the external plantar artery was sought and tied; this checked the bleeding sufficiently to leave it for the night, and Dr. Kissam was notified. I went with him to see the patient the next morning. We found that there were yet several small vessels which continued to bleed. Their texture was such that a ligature applied to them cut completely through them, and came off at once,—so that it was very difficult to check the hemorrhage, but by great care we finally arrested it. The internal plantar artery, which had been closed by the constrictor was sought, and it was found to be perfectly closed with a firm clot, no bleeding having occurred from it. In fact, it was about the only vessel in the wound which did not bleed.

POPLITEAL ANEURISM TREATED BY THE APPLICATION OF THE "ARTERY CONSTRICTOR" TO THE FEMORAL ARTERY.

Wm. L——, a cachectic mulatto, aged 50 years, was admitted to the Brooklyn City Hospital, August 4, 1871, under care of Dr. D. E. Kissam. In March last, while descending a flight of stairs, the patient slipped and wrenched his left leg, which gave him at the time some pain about the knee. The following day the pain was so great that he could not bend his knee. In a short time the pain diminished, and he could walk pretty well. Early in June he noticed a tumor in the popliteal region, and at that time he had pain in his foot, and a feeling of numbness in his leg and foot. Since the first of July, he has had sharp darting pains in the tumor. The following is the history as taken by Dr. Balch (Resident): On admission he can extend his leg perfectly, but he cannot flex it completely; there is a tumor the size of an orange situated in the popliteal space; palpation gives distinct pulsation in the tumor, and a decided thrill; auscultation gives a well-marked "bruit." Pressure on the femoral artery stops the pulsation, and the tumor is then easily emptied; stop the pressure, and it immediately refills.

August 5th.—Treatment was commenced by the application of Dupuytren's Pad to the femoral artery; at the same time flexing the leg on the thigh, a bandage was applied from the toes up to the knee. This apparatus remained on till August 17th, at which time the tumor was considerably harder, but the patient would not submit to the apparatus any longer, as he said it gave him too much pain. The leg was then kept flexed on the thigh till August 26th, when, no further progress being made towards a cure, Dr. Kissam invited me to apply the artery constrictor to the femoral artery. Dr. Kissam made an incision about 1½ inches long in Scarpa's space, and found the artery very superficial. The sheath of the artery was opened, and I applied the artery constrictor to the vessel, and immediately all pulsation in the tumor ceased. The wound was closed with silver sutures and adhesive straps, and picked lint, dipped in a weak solution of carbolic acid, placed over all, and the leg enveloped in cotton wadding, and the patient put to bed. In the evening the temperature of the foot and leg was higher than that of the sound limb; there was very little pain; pulse 92.

August 27th.—Rested pretty well last night; wound looks healthy; no pain; no numbness.

August 28th.—Wound begins to suppurate; pulse 84; some fever; complains of numbness; temperature of foot good. *August 29th.*—No fever; pulse 80; tongue a little coated; sutures removed, and wound dressed with weak solution of carbolic acid, and adhesive plaster; some suppuration. *August 30th.*—Wound suppurating freely; no union by first intention. *September 3d.*—Not so much suppuration; Temperature of foot normal. *September 5th.*—Wound begins to heal; removed wadding from the leg; temperature of the leg normal; aneurism smaller. *September 11th.*—Wound nearly healed; patient looking well; no pain or numbness.

September 25th.—Wound entirely healed; patient can nearly straighten his leg, can flex and extend his foot without any trouble. *October 5th.*—Discharged from Hospital, cured.

The immediate relief from pain which followed the application of the constrictor was in marked contrast with the great distress and pain attending the treatment by compression and flexion.

AMPUTATION OF THE FOREARM WITH APPLICATION OF THE "ARTERY CONSTRICTOR."

Christian S——, æt. 39, admitted to the Brooklyn City Hospital August 7, 1871. This patient, while at work in his shop, had his wrist caught between two wheels, producing a badly-lacerated wound of the dorsal aspect of the hand, compound dislocation of lower end of radius, compound fracture of the styloid process of ulna, and crushing of the carpal bones. The parts above the wrist were uninjured. I saw the patient at one P.M. He was then etherized, and I amputated the forearm at its lower third, by dorsal and palmar flaps. The artery constrictor was applied to the ulnar artery, the radial and interosseous arteries were secured by silk ligatures, the flaps brought together by wire sutures, and dressed with lint soaked in a solution of carbolic acid and water; patient put to bed, arm at rest and elevated upon a pillow, and an opiate at night.

8th. Patient feels very weak (probably due to loss of blood before operation); pulse 120; has pain in stump; ordered an opiate; vomited after breakfast to-day. *9th.* Pulse 110; stump looks well; suppurating where the ligatures were applied, *no suppuration* on side where the constrictor was used. *10th.* Pulse 105, suppuration confined to the radial side. *12th.* Feels better; pulse 100; sat up in bed to day. *15th.* Removed sutures. The flaps on the ulnar side of arm have entirely, healed by first intention; on radial side suppuration continues. *17th.* One of the ligatures came away to-day. *20th.* Patient went out on pass to day, still suppurating at point of radial ligature. This ligature remained in the stump until September 29th. *October 12th.* The wound has entirely healed, and the patient is discharged from the hospital, well.

AMPUTATION OF THE LEG WITH APPLICATION OF THE ARTERY CONSTRICTOR.

Thomas T——, æt. 40, was admitted to the Brooklyn City Hospital August 17, 1871; service of Dr. D. E. Kissam. The following history is furnished by Dr. Rushmore (Resident): While at work on the East River Bridge, the patient's ankle was caught by a coil of rope in motion. He was knocked down and his leg severely injured. He was brought to the Hospital immediately, and there was found a lacerated wound on the inner side of the tibia, at the lower end. The inter-

nal malleolus also fractured. The foot was everted, the plantar aspect being parallel with the outer aspect of the leg. The posterior tibial artery was uninjured; no laceration of soft parts above the wound; but little loss of blood. The accident happened about 7 A.M.; at 10.30 A.M. the patient was anæsthetized, the malleoli dissected out, and the dislocation reduced by Dr. Kissam, with a view to save the foot, if possible. The edges of the wound were drawn together by wire sutures, except at the most depending part, where there was left an opening for the discharges. On the 19th the patient's general condition was bad; pulse 132, skin hot, foot cold; sensation in the foot good, no discharge from wound; inner side of leg and thigh red, painful, and hot. At 2.30 P.M., after consultation, it was decided to amputate. The patient was etherized, and Dr. Kissam amputated below the knee by anterior and posterior flaps. The soft parts on the inner side of leg at the point of amputation looked and smelt unhealthy. At the request of Dr. Kissam I applied the "constrictor" to the anterior tibial and the posterior tibial arteries, which were the vessels bleeding, and all hemorrhage was immediately controlled. The stump was united by wire sutures and carbolic-acid dressing applied, patient put to bed and ordered supporting and stimulating diet, and opiate at night. Pyæmia set in on the 21st; he was delirious during the night and part of the day. The integument on the inner side of the thigh inflamed high up as the groin. The stump very unhealthy, had very little suppuration, which was thin and bad-smelling. Sloughing spots formed, one over the tubercle of the tibia and another on external aspect of the thigh. 23d. The flaps sloughed, especially on the inner side and in front. 25th. Patient died to-day.

The stump was examined, and the main artery was found closed at the point of constriction. A few drops of pinkish, thick, bad-smelling matter were found in the vessel, but no clot. To the outer side of the larger artery was a smaller one, lying close to the main artery. This was constricted at a point corresponding to that in the larger vessel, and upon its invaginated inner coats was a clot which perfectly occluded the vessel. There had been no hemorrhage from either vessel after the operation. The absence of a clot in the larger vessel seems to show that the invaginated inner coats of the artery were sufficient to perfectly close the vessel.

From the rough manner in which some of the "constrictors" that I have seen have come from the hands of the instrument-makers, it would appear that they do not all understand the design of the instrument; and I wish to call attention to the fact that the constrictor is not intended to have the effect of an ecraseur, but, on the contrary, a blunt and smooth-finished surface is very necessary. I would recommend to any one who wishes to obtain the best result from the use of this instrument, to pay special attention to this point: every part of the surface which comes in contact with the artery must be polished, and great attention should be paid to the edges of the sheath, to see that they are well rounded and smooth,—this is necessary to secure the integrity of the external coat, more particularly so when it is to be used in the treatment of aneurism. Each constrictor should be tried on a piece of chamois-skin or a fold of soft paper, or better still, an artery from the "subject." If this is done, it can at once be determined when the instrument is perfect. Every instrument which "cuts through" should be discarded, and only those should be accepted which constrict and draw the paper, chamois-skin, or the artery, whichever one is used, into the sheath, and allows of its being pushed out again without breaking or cutting it. At the same time it must permit of a considerable degree of constriction, and must not fit too loosely.

The size of the instrument used must be, to a certain extent, adapted to the size of the artery to be closed. In taking up small arteries in section, as in general operations, a very small constrictor should be used; and I have found that in such cases it is not necessary to isolate the vessel from the surrounding tissues before constricting it, but they may be taken up with a tenaculum or forceps, and constricted *en masse*. In constricting large arteries it is best to separate the vessel somewhat from the other tissues.

The length of time usually required in the application of the artery constrictor for completing the closure of a vessel varies with the size of the vessel and the perfection of the particular constrictor used. In my own cases it has varied from a single minute to several minutes. I usually leave it on the vessel only long enough to thoroughly invaginate the inner coats, and then remove it, which would require for the whole operation not more than one or two minutes. The work of the constrictor may be considered done the moment a complete invagination is accomplished. In the case of aneurism it may be well to leave it on the vessel a little longer, to secure a firm clot in the vessel before removing it, or even to control the circulation above the point of application.

No constrictor should be used in an operation until it has been tried upon a dead artery or on a piece of chamois-skin or fold of soft paper, and its size and peculiarities determined by actual trial; any imperfection will then be seen, and may be remedied by polishing or filing down, as the case may require.

As soon as the instrument-makers learn exactly what is required of the constrictor, they will, no doubt, be able to furnish constrictors which will be perfect in every respect when they leave the shop, and then these precautionary measures will no longer be necessary. Mr. Pfarre, of Tiemann & Co., has a thorough knowledge of what is wanted in the instrument, and makes some very good ones, and when requested, will take pains to adapt the constrictor to any sized artery desired, or he will furnish them in sets of three or four instruments of different sizes.

Original Lectures.

LECTURES ON OTOLOGY.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

By Prof. H. KNAPP, M.D.

Reported by Charles S. Turnbull, M.D.,

ASSISTANT TO THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE.

THE ANATOMY OF THE MEMBRANA TYMPANI.

The *membrana tympani*, or drum-head, separates the external meatus from the tympanic cavity. It is set in a groove upon a ridge at the tympanal termination of the bony meatus. It is situated obliquely, its outer surface being directed downward and forward.

Upon viewing the membrane, we distinguish the following details:*—In the centre of the upper portion a white pointed elevation is conspicuous,—this is caused by the short process of the hammer bone; from this a

* The lecture was illustrated by drawings on the blackboard, anatomical specimens, and microscopic preparations.

ridge, formed by the manubrium mallei, runs downward and slightly backward, terminating in a navel-like depression called the *umbo membranæ tympani.*

The area of the drum-head is best divided, according to Sir William Wilde, into an inferior, superior, anterior, and posterior segments.

The *inferior segment* is defined by lines running at right angles from the umbo forward and backward to the periphery.

The *superior segment* presents itself as a purse-like, flabby projection, the inferior boundary of which runs horizontally from behind forward, with the short process lying a little before its centre. On account of its flabby and folded appearance, the superior segment of the membrane is called the flaccid portion, or "*membrana flaccida Shrapnellii.*" As the folds are directed from the short process partly backward and partly forward, they are distinguished as *posterior*, and *anterior folds.*

That part of the membrana tympani lying in front of the manubrium mallei, between the anterior-superior fold and inferior segment, is called the *anterior segment*, and is generally somewhat depressed.

In a similar way the *posterior segment* lies between the handle of the malleus and the posterior portions of the upper and lower segments.

At the junction of the anterior and inferior segments a bright triangular speck, pointing towards the umbo, is conspicuous on inspection with the mirror, and is produced by the peculiar curvature of the membrane being convex from the umbo to the periphery.

The membrana tympani is of a pearly-gray *color*, somewhat yellowish in the centre, on account of the surface of the promontory shining through the translucent membrane, the centre of which lies much nearer the promontory than the periphery. It is whiter at the periphery, because there the circular fibres and the connective tissue continued from the neighboring parts to the membrane are more abundant than in any other part. Upon considering the *structure* of the membrana tympani we find it composed of *three layers*, divided as follows: first, the *cutaneous*, containing the dermoid and sub-dermoid layers; second, the *fibrous* layer, consisting of radiating and circulating fibres; and third, the *mucous* layer, containing the epithelial and sub-epithelial layers. The fibrous layer is found devoid of both blood-vessels and nerves, whilst the two others, being continuations externally from the epidermis of the meatus, and, internally from the lining mucous membrane of the tympanum, are supplied with nerves, vessels, connective tissue, and epithelium. The thinnest portions of the membrane are about midway between the end of the handle downward and forward in the anterior portion, and downward and backward in the posterior portion; and it is in one or other of these positions that we generally find a perforation, whether caused by accident or disease (Wilde).

The *cutaneous layer* is composed of all the essential elements of the cutis, except glands, and is made up of several layers of epithelium, connective and elastic tissue, well supplied with vessels and nerves. The sub-dermoid connective tissue is intimately connected with the fibrous, and is densest at the periphery of the membrane and along the manubrium. A band of parallel fibres, two lines in breadth at its origin, descends from above downward, and surrounds the manubrium, and in it and the peripheral increase of connective tissue the vascularity is greatest.

The *fibrous layer* is composed *a*) of a *radiating* stratum of fine fibrillæ, with connective-tissue corpuscles between them, which are spindle-shaped in their longitudinal section, and round, with three or more offsets, in the transverse section, being a nucleated system of nutritive canals, like that of the corneal substance; *b*) the *tendinous ring*, which is situated near the insertion of the membrane into the groove of the tympanic ring, consists of irregularly interwoven fibres of connective tissue, and belongs to both the radiating and circular strata; *c*) the *circular* stratum, which, however, does not commence in the immediate vicinity of the tympanic ring, is thickest near the tendinous ring, and becomes thinner as it approaches the manubrium. Gruber has described fibres descending like those of the sub-dermoid layer.

The *mucous layer* on the inner surface of the membrana tympani is a part of the mucous membrane lining the tympanic cavity, and is abundantly supplied with vessels, but scantily with nerves. Its epithelium consists of one layer of polygonal cells, which are not ciliated. Gruber describes a *dendritic*, or *dendroid fibrous formation*, which begins in the fibrous layer, with a broad base at the lower and posterior part of the periphery, running obliquely upward toward the handle, and lying with its upper offsets near the sub-mucous layer. It is identic with the fibrous layer, which lies between the circular fibres and the epithelium of the inner side, described more recently, in Stricker's Histology, by J. Kessel. It is densest in the centre of the membrane around the handle, and divides into numerous branches which communicate with one another, and insert themselves finally into the tendinous ring at the periphery. Some of these branches penetrate the layer of circular fibres, and either terminate there or return in their further course on the posterior surface of the fibrous stratum. This membrane, of a more or less trabeculated appearance, constitutes the *sub-mucous* stratum.

On the inner surface of the mucous membrane, and especially upon the trabeculæ of the sub-mucous stratum, are found numerous villi, which have the structure of the mucous membrane, and contain in their axes a loop of a blood-vessel, and so constitute vascular papillæ.

Gruber represents the connection between the handle and membrane as joint-like, and asserts that in many specimens the handle shows at this place a thin layer of cartilage upon its surface. Facing the handle and short process, a cartilaginous formation is imbedded in the substance of the membrana tympani, connected with the handle very loosely on its surface by delicate fibres, but more densely by a kind of capsule on its edges. The manubrium is, however, more densely connected with the cartilage, and he asserts that he has found epithelial cells on the opposing surfaces of the short process and cartilage, and that a synovia-like fluid is found between the bones and the described formation of cartilage (page 63 of his monograph on the membrana tympani). Moos, Prussak, and others deny this joint-like union between the membrana tympani and the hammer bone, the fibres of the membrane proper inserting themselves directly into the periosteum or perichondrium.

The *blood-vessels* of the membrana tympani are derived externally from the arteria auricularis profunda—a little branch of the internal maxillary. In its course it descends from the upper wall, runs along the manubrium, and divides into radiating branches, which anastomose with those of the tympanic ring at its periphery. The capillaries collect into two venous branches, which run alongside of the artery. Prussak and J. Kessel described two venous plexuses which receive the blood from the outer layer of the membrana tympani, the one running along the handle, and the other in a circular direction around the periphery.

The internal vessels are derived from those of the

mucous membrane of the tympanum, "arteria tympanica," the ramifications of which are numerous, forming a dense net-work of capillaries. The fibrous layer, or membrana propria, was formerly considered as having neither vessels nor nerves, but J. Kessel says that it is pervaded by a net-work of capillaries connecting the blood-vessels of the outer layer with those of the the inner layer. The capillaries of the membrana tympani have an arrangement similar to that of the blood-vessels: three strata, the one belonging to the cutaneous, the next to the mucous layer of the membrane, and a third connecting the two with each other by capillaries running through the membrana propria (J. Kessel).

The nerves of the membrana tympani are supplied externally from the tympanic nerve—a branch of the "tempero-auricular," derived from the third branch of the trigeminus. It descend sfrom the roof of the meatus and courses branching in the same direction as the artery. According to Kessel, there are branches running from the outer layer into the fibrous layer, in which a part of them remain, dividing into more minute branches or twigs; while another part pass through it and communicate with the nerves of the mucous layer. Those found internally are scanty, and are transparent, without medullary sheaths.

WOUNDS AND INJURIES OF THE MEMBRANA TYMPANI.

The causes tending to injure this delicate membrane are quite numerous—penetrating instruments and foreign bodies, by external force or violence, such as fracture of the temporal bone, blows upon the side of the head, falls, etc.; sudden concussions of air, as in pertussis, loud, sharp reports from heavy pieces of artillery.

Gruber says that the membrana tympani bears very high degrees of pressure (from four to five atmospheres) without bursting. He thinks that only in membranes previously diseased a rupture is liable to occur by sudden increase of atmospheric pressure. The bleeding in pertussis and other diseases is not always a symptom of rupture of the membrane, as also the blood-vessels of the conjunctiva and other membranes are very apt to burst in this disease.

The *symptoms* are:—

Pain, mostly of an intense character, at the moment of the rupture. Sometimes, however, no pain is felt.

Fainting, which may be repeated during the next twenty-four hours.

Convulsions are very rare.

A loud noise or *crash* at the moment of the rupture, caused by the tearing of the fibres or the sudden pressure upon the labyrinth. The noise persists for some days, in most cases, but gradually diminishing in intensity.

The hearing is impaired in every case where the membrana tympani was normal before the accident, but it may be improved in cases of diseased membrana tympani, for then the membrane is no longer a septum barring the entrance to the waves of sound, the latter having immediate access to the stapes, and the membrana tympani secundaria.

Hyperacusis, or *Sonophobia*, in rare cases: some noises or tones being very disagreeable.

Loss of the faculty of determining the direction of sound. This symptom is not constant, and soon disappears.

Extravasation, covering the rent in an otherwise normal membrane.

A rent or *fissure* of oval or linear shape; at times the dermoid and radiating layers retract more than the inner layers, and a wound with terraced edges is produced.

The *prognosis* of wounds and injuries to the membrane is generally favorable. Wilde, however, observes:—"It is remarkable that, while we experience the greatest difficulty in keeping open a perforation made with a surgical instrument, accidental openings seldom close." This serves as an argument in favor of Gruber's statement, that the membrane was generally diseased before the perforation occurred.

The *treatment* is simple and can be readily given: Do not syringe, but let the ear alone.

Cleanse the meatus with cotton, and insert into it a light plug of cotton or wool to protect the membrane.

The healing in most cases takes place rapidly and without inflammation. If the latter ensues, the symptoms are those of myringitis.

Progress of Medical Science.

PHOTOPHOBIA IN SIGHTLESS EYES.—A writer in the *Br. Med. Journal* cites three or four cases in which marked photophobia remained after destruction of the eyeball, following injuries, in which favorable prognostications had been given by physicians in attendance; their opinions that sight would remain after inflammation had been subdued having been wrongly based upon such persistent sensitiveness to light.

LEAD POISONING FROM SNUFF.—Dr. Garrod reports an interesting case of this nature, which had been caused by snuff which had been packed in lead, and refers to several other cases of similar character. It appears that when moist snuff is enclosed in leaden cases, and especially when subjected to the action of heat in tropical climates, it becomes intensely poisonous from impregnation with the metal. He explains this as follows:—The moisture of the snuff, containing its soluble salts, is evaporated and condensed on the sides of the leaden case, upon which it slowly acts; and the lead salts, thus brought into solution, gradually impregnate the mass.

ALBUMINURIC RETINITIS.—Mr. Swanzy, speaking of this affection, says (*Med. Press and Circular*): "Every one who has busied himself specially with diseases of the eye must have had frequent occasion to diagnosticate Bright's disease by the opthalmoscopic appearances, while, as yet, there were no other prominent symptoms;" the disturbance of the function of the eye being the first thing which would lead the patient to seek medical advice. He thinks the physician who takes the trouble to learn the use of this instrument will be abundantly paid, during his first five years' practice, in his ability to use it as a means of diagnosis in this affection alone. He says that "as a general rule, in those cases where the eye gives the first indication of the presence of Bright's disease, the progress of the latter is from that time very rapid. From three to six or eight weeks is commonly long enough to bring the case to a fatal termination, and it is rare for these patients to live for three or four months after the sight has become affected."

TREATMENT OF FAVUS WITHOUT EPILATION.—Prof. Enrico de Renzi has undertaken to treat this affection without removal of the hairs, by the following method: First, the nature of the disease having been determined by the aid of the microscope, the hair is cut closely and the head rubbed with an ointment consisting of one-tenth part of phenate of soda. After a very short course of treatment the parasitic growth is seen to lose its transparency, become granular, and at last is

detected, by aid of a magnifying glass, reduced to fragments around the roots of the hairs. Under the continuance of this treatment it completely disappears, never to return except as a result of a new engrafting of the parasite.—*Lyon Médical.*

Gelsemium in Irritable Bladder.—Dr. W. Scott Hill, of Augusta, Maine (*Am. Journ. Med. Sciences*) relates five cases of irritable bladder which were relieved by the administration of Tilden's fluid extract of gelsemium.

Electrotherapy.—J. W. Holland, M.D., Prof. Chem., Univ. Louisville (*Am. Practitioner*), speaks of a case of "nervous deafness," due to a sudden but enduring apathy of the auditory nerve, in a patient aged forty-one, which was considerably improved by the feeblest current from a volta-faradic coil, after a sitting of five minutes' length. The revival of the auditory nerves gained fresh force from each electrical sitting, and he presumes that, as five applications have accomplished so much, by continued excitation the torpor may eventually be entirely removed.

Uterine Cloth Tents.—In a reprint from the *Atlanta Medical and Surgical Journal*, Dr. V. H. Taliaferro, of Columbus, Georgia, gives some practical observations upon medication by the use of uterine cloth tents in diseases of the body and cavity of the uterus, with accompanying wood-cuts. They are designed as a safe, ready, and thorough means of intra-uterine medication, dilatation in uterine cervical structures, and of preparation of the uterus for intra-uterine injections. That they accomplish these objects with greater safety and thoroughness than any means heretofore employed he is fully convinced.

Knee-joint Amputations.—Dr. W. H. Hawkins, of Rocky Comfort, Arkansas (*Proceedings Ark. Med. Assoc.*), presents two successful cases of this amputation, and notes the excellent treatises upon this subject by Drs. Markoe and J. H. Brinton. In general, he believes that knee-joint amputations compare favorably with amputations of the leg at any point above the knee, and as economy in preserving as much of a diseased or injured member as possible is always desirable, this operation possesses decidedly the advantage in this particular.

In these two cases the antero-posterior flap, with retention of the patella, was adopted, though the condyles were shaved off. The shaving off of the condyles he regards as an unnecessary proceeding, and, in future operations, he will follow Dr. Stephen Smith's method, as detailed in the *Am. Journ. Med. Sciences*, 1870. It admits of a more thorough drainage, and places the cicatrix in a position least liable to be pressed by an artificial limb.

A Plan for Facilitating the Reduction of Strangulated Inguinal Hernia by Taxis.—A correspondent of the *British Med. Jour.* calls attention to a method recommended by Baron Sentin to be followed in this operation. The patient is to be placed on the back, with the hips well raised, and in case the hernial tumor is not reducible by the ordinary manipulation, the surgeon is to pass his index finger up into the ring, if possible to the outer side of the gut. After crowding the point of the finger past the column of the ring, strong and constant pressure is made, until the fibres of the ligament give way, or the opening is perceptibly enlarged, when it will be found that the intestine can be returned easily to the abdomen by the usual effort. The conditions which contraindicate a resort to this procedure are:—

1. The fact of the hernia being old and irreducible.
2. The presence of the constriction at the inner ring—the external ring being too small, and the canal too long, to admit the finger.
3. The existence of general symptoms of grangrene of the intestine.

Tanacetic Acid as a Substitute for Santonine.—This acid is prepared by distillation of the heads of common tansy (*tanacetum vulgare*). The filtered residue is evaporated to the consistency of honey, treated with lime and animal charcoal, dried, and then dissolved in water acidulated with hydrochloric and acetic acids. The tanacetic acid is deposited in colored crystals, which are purified by repeated washings with distilled water. It has a sharp, bitter taste, and is insoluble in water, but soluble in alcohol and ether. Nearly all its salts are crystallizable. As a vermifuge, it operates in the same doses as santonine.—*Med. Press and Circular.*

Hysterical Ischuria.—M. Charcot reported to the Société de Biologie (*Lyon Médicale*) a curious case (if true—Ed.) of this affection occurring in a woman 43 years old, who had suffered for several years with hemiplegia with contractured limbs, and who had an almost complete suppression of urine supplemented by constant vomiting. The total quantity of urine collected with great care by aid of a catheter was, from the 8th to the 14th of July, but 46 grammes; from the 16th to the 22d of July, 33 grammes; and from the 24th to the 30th of the same month, 21 grammes.

The vomited matter, analyzed by M. Gréhaut, furnished urea in quantities very nearly proportionate to the amount which should have been normally discharged by the urinary passages.

Effects of Crude Paraffine on the Skin.—An affection of the hair-follicles is described by Dr. Alex. Ogston in the *Edinburgh Med. Journal* (Dec.), which is caused by prolonged exposure of the skin to the action of the oily matter contained in this substance: the result being an eruption of nodules and pimples on the skin so exposed, speedily breaking out on those who are for the first time engaged in handling it, lasting for a few weeks or months, and then generally diminishing or disappearing. In the few cases in which it becomes chronic a change of employment is a necessity. The mark of difference between the acute and chronic forms is the presence of inflammatory action in the former. A minute examination of the skin in the former variety shows bright-red nodules which are hard to the touch, tender on pressure, varying little in size, which is about equal to that of a grain of barley, are of a rounded form, and consist each of a single hair-follicle with the surrounding parts red and inflamed. A hair emerges from the summit of one of these follicles, the orifice of which is enlarged to the size of a pinhole in a card. This dilatation extends to the deeper part of the follicle, which is filled with a dry and friable mass of epithelial scales and dirt. In the chronic form the hairs have been atrophied and destroyed by pressure, and the skin affected presents the open mouths of these distended follicles, sometimes large enough to admit the end of a probe, the skin including those raised patches of eruption being of natural color.

The *modus operandi* of the crude paraffine in producing this eruption seems to be that the oily matters in the shale called "blae oil," is irritating to the skin; and, coming continually in contact with the epidermis, soaks into the hair-follicles, where it causes an increased growth of epithelium, which is not counterbalanced by increased expulsion of the scales, owing to the fatty

matter from the sebaceous glands being dissolved out and removed by the "blue oil," thus leaving the brittle mass of epithelium to plug up the follicles. Parts of the skin not supplied with hair-follicles are not affected.

A supposed Cause of Heart Disease.—Dr. Moinet (*Edinburgh Med. Jour.*) offers the theory that disease of the heart and aorta are produced in some instances by the weight of the heart when the subject is in the erect posture, producing flexion of the arch of the aorta, rendering its curve more acute, and thus offering an increased resistance to the current of blood; corresponding hypertrophy of the heart being the first noticeable result. This bending of the aorta tends also, he thinks, to weaken its coats, thus laying the foundation for aneurism at the commencement of its arch, where it is so often found. He thinks also that soldiers, on account of the confinement of their chests by their accoutrements and uniform, and the active and prolonged exercise of their upper extremities while they are so confined, are particularly liable to disease of the heart arising from this cause.

Spirits of Turpentine in Phosphorous Poisoning.—The *Bulletin of the Royal Acad. of Med. of Belgium* (No. 9) contains a long article by M. Rommelaere on this subject, in the course of which numbers of successfully treated cases are detailed, the amount of turpentine taken averaging about a drachm daily.

Cutting Microscopic Sections of Eyes.—Edward Curtis, M.D., of New York (*Trans. Am. Ophthal. Soc.*), devised an apparatus for cutting microscopic sections, when needed, of an entire eye. In preparing the tissue and cutting the sections there are one or two points which it is necessary to observe in order to get the best results. Supposing the object to be a morbid eye, this must, immediately after enucleation, be put into Müller's fluid—bichromate of potash, 75 grains; sulphate of soda, 25 grains; water, 6 fluid ounces—and there left for at least three weeks. It is then cut open with a sharp knife or razor, and the halves soaked in water to remove the bichromate. Such portion as is intended for cutting in the section-cutter is then to be further hardened in alcohol. When ready for cutting, the piece is transferred to light-colored oil of cloves, where it is allowed to stay from half an hour to several hours—until thoroughly impregnated with the oil. The piece is then to be imbedded for cutting. For this purpose the following menstruum is recommended: one part of oil of turpentine or benzine to twelve or sixteen of paraffine.

The section-cutters and accessories can be obtained of the makers, Hawkins and Wale, of the Stevens Institute of Technology, Hoboken, New Jersey.

General Syphilitic Inflammation of the Eye.—Dr. Francis Delafield, of New York (*Trans. Am. Ophth. Soc.*), says that the iris and choroid are the portions of the eye which are most frequently attacked after the introduction of the syphilitic virus in the system. In rare cases, however, the inflammation becomes general; iris, choroid, ciliary body, retina, sclera, and cornea are involved, and the production of new cells is so great that staphylomatous tumors of large size are formed. The literature of such cases is scanty. Arlt describes two cases of anterior staphyloma produced by syphilitic new growths from the edge of the iris and ciliary body; but no anatomical examination of the eyes was made.

Von Hippel gives a full description of a case in which the iris, choroid, sclera, cornea, and retina were involved, and a large staphyloma formed.

Two cases of this character have come under the observation of Dr. Delafield, which are published.

Functional Trouble of the Eye.—Dr. Henry D. Noyes, of New York (*Trans. Am. Ophthal. Soc.*), gives a scheme to aid in examining and recording cases of functional trouble of the eye. This printed form he has used for several months past, and finds very useful to insure regularity and completeness in the examination, and for convenience in preserving notes. At the date of report he had kept notes of one hundred cases by this method.

This author, in another article, also exhibited an ingenious apparatus for testing the perception of color.

The Determination of Astigmatism.—An additional method for the determination of astigmatism is recorded by Dr. George Strawbridge, of Philadelphia (*Trans. Am. Ophthal. Soc.*), which has these advantages:—1st. Simplicity. 2d. Accuracy, which results from the extreme delicacy of the test formed by illuminated bar. 3d. The great saving of time. 4th. This method allows of examination being made entirely independent of daylight, and so obviating any inconvenience arising from defective illumination found in cloudy weather, etc.

Dentigerous Cysts.—In an essay to which was awarded the first prize of the Boylston Medical Society for 1871, by W. P. Bolles, M.D. (*Boston Med. and Surg. Journal*), it seems that the sexes are nearly equally liable. Of 23 cases, 11 were males, and 12 females. The number of upper and lower teeth affected is also equal. The majority of the cases occurred between the ages of 10 and 40; 1 to 10, one case; 10 to 20, nine; 20 to 30, nine; 30 to 40, three; 40 to 50, none; 50 to 70, three. Contrary to the usual statement, but as might be expected from their position in the jaw, the lower third molars are the teeth most frequently encysted, and second to these come the upper canines. In the appendix, the writer gives a synopsis of all the accessible cases (29), with the sources whence obtained.

Colles' Fracture simultaneous in both Arms.—A case of this character is published by T. Curtis Smith, M.D., Middleport, Ohio, in the *Cin. Lancet and Observer*. The radius of the right arm was fractured at three-fourths of an inch above the wrist-joint, that of the left at one inch above the joint. These fractures were successfully treated by two pistol-shaped splints applied to each arm, after removing the deformity by extension. At the date of publication the union was firm, and no deformity can be observed in either arm. The patient was a boy, aged 10 years, who, while climbing, was precipitated from a height of fourteen feet to the ground; his weight was received on the palms of the extended hands.

In this case motion is as complete as before the occurrence of the accident. Dr. Smith affirms that if due care is used, deformity will not often follow the treatment by use of two pistol-shaped splints (!).

Transfusion of Blood.—Carl Proegler, M.D., of Aurora, Illinois, late Surgeon German Army (*Chicago Med. Journal*), records four successful cases of transfusion of blood. The patients were French soldiers, who were wounded in the streets and before Paris. The indications for transfusion in these cases were:—1st. Where amputation had been delayed for some reason, with but little chance for the patient, but where the latter insisted upon an operation. 2d. Re-amputation or resection on account of pyæmia or extreme hemorrhage, either on account of dangerous after-bleeding, general debility, or a hemorrhagic diathesis. 3d. Extreme prostration on account of shock, and where life seems to be in imminent danger. The amount to be

injected varies according to circumstances, but it should never exceed sixteen ounces. Care should be taken not to force air into the veins, as collapse is liable to follow.

Chronic Hypertrophy of the Lips.—Dr. R. W. Taylor, Surg. to N. Y. Dispensary (*Med. World*), calls attention, with case, to a form of hypertrophy of the lips, in which the inflammation begins in its connective tissue framework, and which produces a permanent augmentation in its size, and in which the skin and mucous membrane are not involved. He observes that there are five forms of chronic hypertrophy of the lips due to change in the deep structures:—The first due to cell-infiltration into the corium and papillæ; the second, to an increased development of the connective-tissue stratum; the third, to a hypertrophy of the mucous follicles and the submucous connective tissue; the fourth, to angiomatous tumors, either arterial or venous; and the fifth due to lymph-angiomatous tumors.

Typhoid Fever with Capillary Bronchitis.—In this complication, when there is typhoid depression, wandering of the mind and bronchial tightness, Dr. N. S. Davis, of Chicago, Ill. (*Med. Examiner*), recommends the internal administration of chloroform, according to the subjoined formula:—℞. Chloroform, ʒ iij.; acaciæ, ʒ vj.; sacchari, ʒ vj.; aquæ, ℥ vj. M. Dose, a tablespoonful every four hours, alternately with other medicine.

Epulis and Myeloid Tumors of the Jaw.—James Tyson, M.D., Lecturer on Microscopy in the Univ. of Penn. (*Dental Times*), explains the microscopic points of difference in the characters of these tumors, with a view to a completeness of our knowledge of their natural history. Epulis tends to occur other than singly; it is, however, a growth of all ages, though there are those who have claimed that it also belongs to youth. Prof. S. D. Gross, on the other hand, in a recent clinical lecture, said that he had never before met with a growth of this kind at so early an age as seven years. It is usually a tumor of slow growth, and differing from myeloid in this respect; it is often painful; patients afflicted with it suffering much from toothache. Again, epulis is often partially osseous, frequently containing spicula of bone in its centre, detached from the surface of the bone. It recurs under the same circumstances with myeloid, that is, when all parts have not been completely extirpated, though perhaps less frequently than the former. It is generally lobulated, as myeloid tumor in the same situation, but its structure is firmer. It is tougher and more elastic, owing to its fibrous structure. On section of myeloid tumors, more decided characteristics are noticed, which may be recognizable by the naked eye. The cut surfaces are "smooth, uniform, compact, shining, succulent, with a yellowish, not a creamy fluid;" presenting "blotches of dark or livid crimson, or of a brownish or a brighter blood-color, or of a pale pink, or all of these tints mingled on the grayish-white or greenish basis-color." Epulis on section is uniform, firm, white and shining, presenting often in its interior the spicula to which allusion has been already made. Before operation it is not easy to decide whether a tumor is epulis or myeloid, and though appearances on section are more characteristic, they do not become available for diagnosis. As a matter of prognosis it is not of paramount importance that the exact nature of the tumor be known before operation, supposing it one of these two forms, as neither is apt to return if *thoroughly* removed. Recurrence of each occasionally takes place, and it is somewhat more frequent in the case of myeloid; the periosteum should in all instances be scraped after operation. As the only certain means of relief, Prof. Gross recommends "excision of the piece of bone to which it is attached."

Fever Mixture.—The value of aconite in allaying fevers is apparently not so completely recognized as it should be; and having found the following formulas very beneficial in allaying fever, and in controlling it when not dependent upon a deep-seated cause, Prof. Horatio C. Wood, Jr., M.D., Philadelphia, editor of *New Remedies*, publishes the following: Take of Tincture of aconite root, gtt. xxiv.; Sweet spirits of nitre, f ℥ ij.; Solution (or mixture) of citrate of potash, f ℥ iv. Mix. S. Tablespoonful every one, two, or three hours. This formula, containing two drops of the tincture of aconite root to the dose, should be given cautiously, and every hour only in urgent cases which can be carefully watched. Many women will scarcely bear it given every two hours. The following combination is more generally applicable and safer: Take of Tincture of aconite root, gtt. xij.; Sweet spirit of nitre, f ℥ ij.; Solution (or mixture) of citrate of potash, f ℥ iij. Mix. S. Tablespoonful every one or two hours.

Where there is much restlessness with the fever the following formula is recommended: Take of Tincture of aconite root, gtt. xij.; Sweet spirit of nitre, Comp. spirit of nitre, āā. f ℥ iss.; Camphor water, f ℥ iij.; Morphia sulph., gr. ss. Mix. S. Tablespoonful every one or two hours.

The Use of Sewing-Machines.—Dr. A. H. Nichols, in the third annual report of the Mass. Board of Health (*Boston Med. and Surg. Journ.*), presents a full exhibit of the effects on health of the use of *sewing-machines* moved by foot power, based on personal investigation and returns from a large number of correspondents, from which it is evident that most women cannot make continuous use of the common pedal for any considerable time without suffering from general debility and various local disturbances. These evils may be prevented by the substitution of steam or foot power in large establishments, or by the use of electro-magnetic power, or by the use of improved pedals, which greatly reduce the required movement of the feet and legs of the operator.

Pitting in Small-Pox.—W. C. Coleman, M. D. (*Drug. Circ. and Chem. Gazette*), recommends the following, to prevent pitting in small-pox, as the result of his own observation: First, prevent suppuration as far as possible; second, allay irritation; and third, keep the scabs off. To accomplish the first and second, rupture the pocks thoroughly while in the vesicular stage, and apply carbolic acid and mucilage of gum acacia, mixing one part of the former to eight of the latter, and apply freely with a hair pencil. To keep the scabs soft, use olive or sweet oil freely. Continue the mucilage and acid as long as the irritation lasts, and there need be no fears of the oil interfering in any way, provided the mucilage is made quite thin.

Hypodermic Injections of Corrosive Sublimate.—In a practical paper "On the Treatment of Syphilis by Hypodermic Injections of Corrosive Sublimate," by Dr. R. W. Taylor, of New York (*Med. Gazette*), his views are given, in concluding, in eighteen aphorisms, which are thus summed up: While in dispensary and hospital practice the injections may be frequently given, in private practice the smallness of a patient's means may often be an obstacle in the way of the continuance of treatment. That, while in some cases the treatment may be useful by reason of its rapid action, and in others for the smallness of the dose, the inconveniences which it produces, the objections of the patients, and the presence of lesions which contraindicate its use, confine its sphere of usefulness to very narrow limits.

Carbonate of Soda.—A new process for the production of carbonate of soda has been invented by M. Swager. By the joint aid of highly superheated steam and red heat, he decomposes the double chloride of aluminum and sodium, previously fused, thus forming aluminate of soda and hydrochloric acid. The latter is condensed; the former, treated with carbonic acid, yields carbonate of soda and alumina.

Leucin and Tyrosin.—According to James Tyson, M.D., Prof. Phys. and Histology in Penn. College Dental Surgery (*Am. Journ. Med. Sciences*), these organic nitrogenous substances, found in the solids and fluids of the economy in a number of morbid states, have only a marked significance when present in the urine in connection with symptoms pointing to derangement of the hepatic function. Under these circumstances they are of grave import, indicating destructive diseases of this organ which have heretofore invariably terminated fatally. They do not necessarily indicate acute yellow atrophy alone, but may attend any affection of the liver in which there is permanent disorganization of its parenchymatous structure, even if it extend over a period of several months. It does not appear to be present in the urine in cases of liver disease which are perhaps years in completing their course, as in certain instances of cirrhosis, and simple fatty degeneration. When there is deficiency of urea in the urine thus containing *leucin* and *tyrosin*, the mode of death usual under these circumstances (coma or convulsions) can only be rationally explained on the supposition that there exists a condition analogous to uræmic poisoning, or identical with it.

Prof. Tyson presents in full the chemical and microscopical characters, tests, and drawings of these substances; also the modes of obtaining leucin and tyrosin from animal fluids and tissues suspected to contain them.

Hæmoptysis in Consumptive Patients.—D. Francis Condie, M.D., of Phila. (*Am. Journ. Med. Sciences*), says that it is true that the deposition of tubercular matter in the lungs may be preceded and accompanied by hæmoptysis, but by no means so generally as to warrant its being ranked as among the premonitory, much less as a diagnostic symptom of tubercular phthisis. Of 369 cases of tubercular consumption, very full notes of which he has kept, hæmoptysis occurred in 87—that is, about 24 per cent. In 282 of the cases it neither preceded nor was present throughout the attack. The absence, therefore, of hæmoptysis is not to be received in any case as an indication of the absence of pulmonary tubercles, nor can the occurrence of pulmonary hemorrhage be received as an indication of a future or present tuberculosis of the lungs.

In the 87 cases of consumption in which pulmonary hemorrhage occurred under his observation, the hemorrhage preceded in 40 the first symptom of the deposit of tubercular matter some considerable time—say two, three, five, six, or even twelve months; in some cases, however, it preceded the indications of tuberculosis only a few days; in others, again, it occurred at the very onset, so far as he was enabled to judge, of the tubercular deposit. In 29 cases the hemorrhage occurred at different periods during the progress of the disease, and in its latter stage in 18 cases in which the presence of cavities in the lungs was detected upon auscultation.

Flatulent Dyspepsia.—The late Dr. Trousseau, of Paris (New Sydenham Society's translation), in this form of dyspepsia, administered alkaline preparations for a few consecutive days, followed by the administration of bitters. For five or six days, at the beginning of the two principal meals, and on retiring at night, the following powder is useful: Magnesia, chalk, bicarbonate of soda, 4 to 6 grs. each, mixed immediately before taken in a fourth of a tumbler of water. This to be followed by the employment of quassia. In the morning fasting, and at midday, at an equal interval between the two principal meals, the patient ought to drink a cup of the infusion of quassia, prepared by leaving a teaspoonful of cold water for 15 or 20 minutes in a goblet made of this wood; or, which is much better, by macerating two grammes of quassia shavings in cold water from four to six hours. In these cases wine of cinchona is also indicated. It ought to be given either immediately after meals, or immediately after the patient has taken a small quantity of food, in order to prevent the pain in the stomach which is apt to be excited when taken fasting.

Urethral Baths.—Prof. Andrews, of Mercy Hospital, Chicago, Ill. (*Med. Examiner*), in cases of gonorrhœa uses the subjoined solution by way of irrigation: cryst. carbolic acid, 5 grs. to the ounce, and chloride of zinc, 2 grs. to the ounce of water. He has a reservoir holding a quart or more, five feet above the patient's penis. A rubber tube, size No. 6, terminating in a flexible catheter, is attached, and the catheter inserted into the urethra, but not into the bladder. A quart of the solution is placed in the reservoir and allowed to run into the urethra, where, escaping from the eye of the catheter, it runs out again between the catheter and the walls of the canal, giving the latter a thorough and long-continued drenching. The effect, he says, is excellent.

The Fatty Kidney.—James Tyson, M.D., Philadelphia (*Phila. Med. Times*), in a clinical lecture "On a case of smooth white kidney," mentions the two forms of *fatty kidney*, viz.: the *smooth white kidney*, and the *large yellow fatty kidney;* the former being the more common sequel of acute Bright's disease, especially of the scarlatinal type. Generally fatal within three or four years, it is said by Dickinson and Stewart to be amenable to successful treatment. He has never seen a case of recovery, although he has seen the strength and general health of a patient temporarily restored while the urine still gave evidence of the existence of the disease; and that the duration may exceed the usual period is evidenced in the case presented—lasting apparently thirteen years.

Cases of the *large yellow fatty kidney* are invariably fatal, and generally within a year after its detection. This form of fatty kidney, Dr. Dickinson believes, is more frequently a sequel of the acute nephritis following exposure to cold than of the scarlatinal nephritis. Dr. Tyson can suggest no reason why it should not succeed scarlatinal nephritis; though he has never known it to do so. He also believes it may originate primarily, especially in the intemperate. A case came under his observation which, he thinks, originated in this way—in the driver of a beer wagon. The drivers of these wagons perhaps consume more spirituous liquors than any set of laborers, because they are expected to invite the purchaser of every cask delivered to drink with them—and whiskey is generally taken.

Incompatibles with the Perchloride of Iron. M. Bouilhon (*New Remedies*' translation from *L'Union Pharm.*) gives the subjoined list of incompatibles: Salts of silver; protosalts of mercury; alkalies, their carbonates and bicarbonates; the arsenites and arseniates; borate of soda; tannin and vegetable astringents; gums; vegetable extracts, and vegetable infusions; albumen; casein.

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THE PROPOSED DEPARTMENT OF SAFETY IN THE CHARTER OF COMMITTEE OF SEVENTY AND THE HEALTH DEPARTMENT.

The present Health Department of the City of New York is not one in which either the physician or citizen can take any special pride. The charter which brought it into existence was framed more for the sake of extending the patronage and perpetuating the power of the Tammany Ring than for any design of serving the legitimate interests of the public. Although, as a department, it may, by comparison with others, be considered a very useful one, it has by no means escaped the contamination which its origin and associations forced upon it. No one was surprised to find that it was badly constructed, and none are disappointed in learning that it has been badly managed. It is certainly some comfort to know that as the community could not expect much from it, that it is not now disappointed. The medical element of the Board, the most important of all, was designed to be of the utmost insignificance, and the facts of experience have shown that the expectations of the framers of the law have been fully realized. Practically speaking, we might say that the medical commissioners have been the merest ciphers as to any influence which their opinions or counsels may have had upon their colleagues. The profession have yet to hear of anything to the contrary of such a supposition. No one could expect it to be otherwise, as the Board was constituted, there being but two medical commissioners, with the Health Officer of the port, against six laymen. It is conceded by every disinterested person, that there are many questions connected with sanitary science upon which medical men only can give any intelligent opinion. These questions are not unfrequently of the greatest importance to the commonwealth, and when they are misunderstood by layman who have, by the mere force of votes, the power to cancel a strictly scientific opinion, the consequences are sometimes disastrous. Medical opinions upon matters connected with the public health are not generally calculated to further the interests of unprincipled contractors, and such others as by their vocations are abettors of dangerous nuisances. Such being the case, it is easy for the layman in the majority to be convinced to a contrary opinion, more especially if the Board is working for political capital. We contend, in the interests of the people, that in order that all truly scientific questions connected with public health should be properly considered and practically answered, that the medical members should have the controlling power. They should, in other words, be in the majority. The medical profession have a right to insist upon such a provision, and the public, if they properly understood its importance, would demand it of their law-givers.

It was the lack of a medical majority in the Commission that has in a great measure rendered it so barren of practical results as compared with the Metropolitan Health Board, of which the city had no little reason of being proud. In fact, the only redeeming feature of the present Commission, and the only measure that perhaps enabled it to cover up the ignorance of the framers of the law, was the retention in office of such of the executive officers as had distinguished themselves under the old *régime*. It is but due to these latter gentlemen to say that they have accomplished by hard work every good and acceptable service for which the members of the Commission claim the credit. While we have reason to congratulate ourselves that the affairs of the Board are not on this account as bad as they might have been, we have no right to expect that such a rule will be so luckily followed out in future. On principle, it is just as liable to be violated as not; in fact—in accordance with the accepted political principles of the day—more so. The only way to prevent the possibility of the appointment of incompetent men to do the executive work of the Board is to have the medical commissioners in the majority. Then we shall always have a guarantee for the appointment of men to do the executive work who have the requisite professional capability, and not trust, as we have done, to the mere luck of a forced expediency.

The proposed charter is framed upon the principle of minority representation, a feature which, under the present circumstances of the city government, is commendable in many ways, and impracticable in others. By it the legislative power of the corporation is vested in the Board of Aldermen, who are to be elected in accordance with the following plan, which governs

all elections within the naming of the said charter:—"Each qualified voter in each Senate District may give one written or printed ballot with the indorsement "Aldermen," which shall contain a list of not more than nine names. The voter may repeat on such list the same name nine times, or may make such list to consist of nine different names, or may repeat any one or more name or names on said list as often as he may see fit." The principle, if properly carried out, will effectually check the abuses of power and influence of which the former political rulers of our city have been guilty, but in other respects it is a change in the forms of appointment which in many cases may not be the most conducive to public welfare. It is in politics as in everything else, when changes are made there is too much liability to travel from one extreme to the other. This spirit of radicalism in the cause of non-partisanship is, in fact, manifest in many portions of the charter, and not the least so in that referring to sanitary regulations.

The charter now in force provides for a number of useless departments which are drawing from the city treasury without an equivalent return in the shape of duties performed. As prominent examples of these we have the Bureau of Street Cleaning and the Permit Bureau. The chief officer of each of these draws a salary of four thousand dollars for services which are merely nominal, and for which a salary of five hundred would be an unnecessary extravagance. This fact has tended not a little towards making the changes in the proposed law so absolutely reformatory and so uncompromisingly radical. Again, the action of the present Health Commission, as manifested in the political trickery which culminated in raising their salaries, already amply remunerative, has tended to the same result. The Tammany party, with a show of reform characteristic of all their endeavors to swindle the public, caused to be passed by the last legislature what is known as the "Two per cent. Tax-bill." This provided that not more than two per cent. of the taxes should be levied upon the assessed valuation of property, out of which amount the whole city government was to be carried on. A Board of Apportionment was created by this bill to divide the money among the several departments and to fix the salaries for 1871. It is true that the appropriation required by the department was very much curtailed; but what was gained for the apparent benefit of the public in one direction was, in the direct interests of the Health Commissioners, lost in another. It was ordered that all salaries of five thousand per annum and over should be reduced twenty per cent. The Commissioners, however, with that disinterestedness of the public welfare which has characterized their political actions during the past year, succeeded in having their respective salaries raised to the modest sum of ten thousand a year. As this was done before the Board of Apportionment commenced their labors, the said salaries could safely be left to the necessities of the required reduction. The result was that, instead of five thousand, which they each received before their respective salaries became increased, they actually received, after the reduction, eight thousand! It is easy to see that the pretended retrenchment was a real benefit to the members of the Commission, while at the same time the general funds of the Board were proportionately reduced in such a way as to cripple its legitimate functions. Since the indignation of the public has become so justly aroused at the extravagance of the different departments, the salaries of the Commissioners have, with a great show of a sacrifice for the public good, been reduced, since January first of the present year, to their legitimate standard.

In view of these facts, it is not to be wondered at that the Reform Committee have become prejudiced against the present Board, and have sought for many changes in its plan of organization. Taking the one extreme as a starting-point, they have, perhaps naturally, but not, in our opinion, wisely, aimed at the other extreme. There is no doubt in the minds of every unprejudiced person that the present Commissioners have by their actions, as a purely political Board, forfeited the confidence and the respect of the community, and that they one and all deserve dismissal; but that, on their account, the whole plan of administration of the Board, as such, should be so thoroughly remodelled, is a question of no small moment to practical sanitarians.

Among the changes proposed by the Committee of Seventy is the creation of "The Department of Public Safety." In order to give an idea of the provisions, we quote the following:—

"*Art. VII.*, Sec. 43.—The Department of Public Safety shall be under the charge of seven persons, who shall be a board to be called "The Board of Public Safety;" said Board shall consist of the Mayor, and of six Commissioners, to be called "Commissioners of Public Safety," which Commissioners shall be elected by the Board of Aldermen in the manner hereinafter provided.

"*Sec.* 44.—Between the 1st and 15th days of May, in the year 1872, six persons shall be elected by the Board of Aldermen as such Commissioners; at such election each alderman shall give not more than six open ballots, upon each of which shall be printed or written the name of one candidate for the office of such Commissioner, and each of which shall be signed by the alderman voting, and shall be recorded by the Clerk of the Board. Each alderman may give the whole of his ballots for one and the same candidate, or may distribute them between six different candidates, or in a less number, in such proportion as he may see fit. The six persons having the largest number of votes shall be deemed elected. In the event of a failure to elect six Commissioners, by reason of less than six persons having been voted for, or by reason

of two or more of the persons voted for having received an equal number of votes, under such circumstances that there shall be no full number of six persons having received a higher number of votes than any others, a new election for six Commissioners shall forthwith be held in the same manner."

Section 45 provides that the Commissioners elect shall divide themselves by lot into two classes of three each, one of which classes shall hold office for three years from the 15th day of May, 1872, and the other for six years from same date.

This department also provides for a division into five bureaux respectively as follow: I. "Bureau of Police," the chief officer of which shall be "the Superintendent of Police;" II. a Fire Bureau, the chief officer of which shall be called "the Chief Engineer of the Fire Bureau;" III. a Bureau of Health, the chief officer of which shall be called the Sanitary Superintendent;" IV. a Bureau of Buildings, the chief officer of which shall be called "the Superintendent of Buildings;" and V. a Bureau of Statistics, the chief officer of which shall be called the Register of Records."

This Department of Public Safety it is intended shall represent the Police, Health, and Fire departments, and in addition the Department of Public Buildings. How all the supervisory duties of these can be compressed into the labors of a commission of seven persons is an enigma in the first place, and, in our opinion, will prove to be an impossibility in the second place. The conception of such an idea can be explained only on the ground of a determination to court a dangerous and stupid extreme. We fail to see how this board can, consistently with even a common-sense idea of their duties, attempt to perform one-half of what even as an advisory committee the community require of them. The real work must be done by the different heads of bureaux, and the Commission must necessarily be more ornamental than useful. It is impossible to conceive how the Commission can affect the workings of the respective bureaux except as the passive instruments of the necessities of each, or as active hindrances to the efficiency of the respective executive departments. If the Commission is really to be good for anything it should be competent to exercise an intelligent controlling power over all—which, under the circumstances, seems to be simply impossible.

Each of the bureaux, if they require anything, should have a commission practically competent to advise and direct the executive officers. This should be particularly the case with the Health Department. There are many questions connected with the health of the community which, as before intimated, cannot be decided upon by any save a committee of strictly medical men. We have always held to the opinion that a model health law should provide for a distinct health commission, composed, if not entirely, at least of a majority of thoroughly educated physicians who should be competent to direct the officers under them. Practical sanitarians need no argument to prove the utility of such a measure, and the real interests of the citizens demand it.

The appointment of such health commissioners should be very carefully made by thoroughly competent and responsible parties. Far from the acknowledgment of any such necessity, the Board of Aldermen are left with the whole discretionary power of electing any applicant they may see fit. There is no provision whatever for the election of any medical man to that office, and yet this Commission is supposed to be able to advise intelligently concerning matters pertaining to the health of the community! Even if such a provision were made, the medical gentlemen could not possibly claim a fair representation in such a board, and would be sure to be in the minority when any vote was to be taken upon any measure referring to proper sanitary regulations. In any event the influence of the profession would be, in matters over which it is pre-eminently entitled to opinions, a mere cipher.

Again, supposing the profession were to be fairly represented, what guarantee is there that the aldermen could or would make an acceptable choice. Would it not be more probable that, under the circumstances, the only candidates who would stand any chance for election would be those who could command the most political influence with the Board as a whole? This latter recommendation is not such as the respectable portion of the medical profession as a body can allow themselves to court.

We are constrained to confess, at the risk of being considered out of the fashion, that we are in favor of the constitution of a Health Commission by itself; that this Commission should consist of a majority of well-qualified medical men, and that the members should be appointed by some more responsible parties than a board of aldermen whose official functions as electors are so blindly hemmed in by the principle of minority representation. A responsibility of appointing the members of such a commission in such a way, shared as it is among so many, amounts to nothing, even should the complication of the machinery allow them to come to any choice at all. While we may approve of the experiment of minority representation, we have no hesitation in objecting to the principle as applicable to the appointment of the members of the Committee of Safety. As a committee we object to it as wholly incapable of performing the duties to be assigned to it, especially those as referring to health matters. There is, in our opinion, very little improvement to be made on the old Metropolitan Health Bill, not only as regards its organization, but as regards the responsible appointing power. During its operation it gave very general satisfaction, and the repeal of the old law was not warranted by any improvements which the present law effects or the proposed law contemplates.

THE MEDICAL WORLD.

The *Medical World*, for February, comes to us without an Editor. We are simply told that "Dr. Reuben A. Vance, whose name lately appeared as editor, is no longer connected with the *Medical World*." This announcement is brief and explicit, and the publishers evidently scorn any explanation. It is fair to presume that this is another one of those serious misunderstandings between the publishers and the editor, in which the former being the owners of the periodical, the latter is pretty sure to be worsted. But this action may admit of all sorts of explanations, and except from an unpardonable discourtesy to a professional gentleman, who has shown himself qualified to conduct such a journal, no one would be particularly interested in the matter. The affair, however, wears a serious aspect when the publishers assume the editorial control of a journal, and impose their opinions upon the subscribers. They promise almost everything in the line of medical journalism, and state that in return for their labors they want a circulation of ten thousand copies per month (!). In order to prove to their subscribers that they are capable of doing what they promise, and that they fully appreciate how the English language should be used, we will quote the following paragraph of their announcement referring to the prospective ten thousand subscribers: "Out of nearly seventy-five thousand physicians in the United States, of all classes, there is no medical journal having anything like the above circulation." We should hope not.

The profession owe it to their self-respect to frown down any such presumption on the part of publishers of medical journals, and should cease to patronize any undertaking actuated by such a spirit. We predict for the journal a deserved failure.

THE PHARMACY BILL.

Up to the time of our going to press, the fate of the Pharmacy bill is still undecided. It is now before the Health Committee of the Assembly, and in the hands of its chairman Dr. Robert Loughray, and the other medical members of that committee, it is to be hoped it will receive the merit of a favorable report. Senator Weismann has done his part in the matter, and it is not fair to suppose that Assemblyman Loughran and his medical confrères will be found wanting when the time comes to hear from them. The professions of medicine and pharmacy, in this city, are alike interested in the passage of the bill, and they naturally look to their respective representatives in the legislature to have their unquestioned rights guarded against the unprincipled machinations of the defenders of the present obnoxious and oppressive law. There can be no arguments against its passage save such as are so strenuously urged by the interested office-holders under the present law.

Reports of Societies.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

Stated Reunion, February 9, 1872.

Dr. W. N. Blakeman, Vice-President, in the Chair.

TENOTOMY IN MYOPIA.

Dr. R. H. Derby read a paper upon *Progressive Myopia and it's Operative Cure*, advocating the doctrine that the large majority of cases of progressive near-sightedness are attended by, and to a great extent dependent upon, insufficiency of the internal recti and hence to be relieved by division of one or both of the externi. The rules, so carefully elaborated by Von Graefe, both for determining the propriety of this operation, and for securing by it exactly the degree of effect intended, were given in detail. Several cases were cited from the practice of Von Graefe and others, where the myopia had not only been arrested in its progress by the operation, but had even considerably diminished after it; and the paper concluded with reports of selected cases from the writer's own records.

Dr. Knapp, while fully endorsing the rules laid down, as having rescued the operation from the domain of empiricism to that of strictly scientific surgery, was yet inclined to think the range of its applicability more limited than Von Graefe and his adherents contended. In his own experience the cases of myopia attended by a degree of insufficiency of the internal recti, sufficient to warrant the operation, were comparatively rare. Indeed, while admitting that insufficiency of these muscles was more frequent in myopic than in emmetropic and hyperopic persons, he must yet state, in opposition to Dr. Derby's assertion, that only a small percentage of the cases of near-sightedness was complicated with such insufficiency. Few cases of myopia were progressive after the age of twenty-four, or thereabouts; and in these severe ones tenotomy was apt to fail of the desired effect. This, he thought, was due to the ætiology of the affection. Pressure of the recti upon the globe had probably less to do with its causation than persistent strain of the accommodation; the steady contraction of the ciliary muscle interfering with the venous outflow at the anterior part of the eye (through the canal of Schlemm), and hence producing passive hyperæmia of the choroid with transudation, and softening in the coats of the posterior part of the globe, which then yield more readily to the intraocular pressure and become extended.

Dr. Pooley agreed with Dr. Knapp, and would cut the external recti only in cases accompanied by evident muscular asthenopia.

Dr. Derby insisted upon the insufficiency of the interni only in cases of *progressive* myopia, stating that it was found in nine-tenths of these cases. It produced its effects, doubtless, not to any great extent directly, by causing an increase of pressure upon the globe; but indirectly, by inducing that very strain of the accommodation to which Dr. Knapp had referred. This was in virtue of the intimate association between the contraction of the ciliary muscle and the effort at convergence of the optic axes. If this effort were increased by weakness of the internal recti, the muscle of accommodation must be constantly stimulated to excessive action.

Dr. Pomeroy thought the difficulty of converging

the optic axes was sometimes an advantage to the myope. It would lead him, when his eyes were fatigued, to abandon the effort to fuse the two images, and use one eye only, relaxing the strain upon the accommodation, and placing the object somewhat further off.

Dr. Knapp called attention to the fact that frequently the worst cases of progressive myopia were those in which this very thing was constant—where the patient never used but one eye for near work, and where, therefore, there could be no pressure of the recti upon the globe, or strain of accommodation from the effort at convergence. The relation between the effort to converge the axes and that to accommodate was not a fixed and necessary one—so much convergent effort necessitating so much accommodative—but was purely a matter of education.

NASAL DOUCHES.

Dr. Burrall presented two nozzles, to be attached to a Davidson's syringe, for showering the nasal cavity. The first was about the size of a No. 8 catheter, some four or five inches long, and pierced on one of its quadrants with three longitudinal rows of holes. The intention was that when the instrument, introduced into the nostril, was laid upon the floor of the nose, the outer row should throw its streams into the inferior meatus; the middle row, into the middle meatus; and the upper row, directly upwards toward the roof of the cavity. The second nozzle was the ordinary bent one for washing out the posterior nares, except that the rose at its end was made to throw three sets of streams forwards and upwards on the plan above given.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 1, 1872.

Dr. E. R. Peaslee, President, in the Chair.

REPORT ON VACCINATION.

Dr. Gouverneur M. Smith was added to the Committee on Vaccination in place of Dr. H. D. Bulkley, deceased. The Committee is composed of the following gentlemen: Drs. Elisha Harris (Chairman), Wm. C. Roberts, Alfred C. Post, Stephen Smith, Jonas P. Loines, Frank P. Foster, Edward H. Janes, and Gouverneur M. Smith.

Dr. Roberts read the report, of which the following is an abstract: The daily observations and experience of physicians have, for seventy years, uniformly proved that in their personal exposure to the sick of small-pox, and by the severest testing of the attendants of the sick in hospital, sick-room, and ambulance, thorough vaccination continues to give full protection against the contagion, for they are freely exposed to its presence, and even to its touch, without harm. Thorough vaccination is thorough protection against small-pox, and is as effective now as in the time of Jenner. It is generally admitted, and clearly proved, that thorough vaccination protects against small-pox without danger to life or diffusing any infection. Scarred and disfigured faces are rarely met with at the present day, except in persons who, having neglected to be vaccinated, have taken small-pox in the natural way. In proof of this protective influence of vaccination, and the liability to infection without it, we may mention that in a severe epidemic in Norwich, England, of 306 persons in several families, there were among 91 vaccinated persons, two cases of mild varioloid, and no deaths; and of 215 unvaccinated persons, 200 took the disease, and 46 of them died.

Revaccination is recommended, not only as a measure of renewed security against small-pox, but as a test of the completeness of the first vaccination. It is necessary to test the completeness of protection and to exhaust the receptivity of small-pox, and of vaccination itself. He who is insusceptible to one or more revaccinations with fresh virus may generally deem himself as secure as vaccination, or even an attack of small-pox itself, can make him.

Small-pox, it is true, occurs occasionally in persons who have been once vaccinated; but its occurrence is very rare in those recently vaccinated, or revaccinated once or oftener, or in those in whom the first vaccination was thoroughly good, as judged by the Jennerian rules for vaccination. In these instances the disease manifests itself oftenest in mitigated form, known as varioloid, and the protection afforded by vaccination is found to be equal to that which is conferred by a previous attack of small-pox. It is believed that a revaccination will destroy any susceptibility to small-pox infection which may remain from incompleteness or imperfection of the primary vaccination. In the army of Bavaria revaccination has been compulsory since 1843, and from that date until 1857—a period of 14 years—not even a single case of unmodified small-pox occurred, nor a single death from the disease. The vaccine virus now in use in New York City is justly regarded by the most experienced physicians as trustworthy and effective, and affords all the necessary protection. Vaccine virus is not a carrier of other diseases. To a neglect of reasonable precautions, and to carelessness in the performance of the first vaccination, are due the unmerited discredit into which this greatest boon of a merciful Creator has occasionally fallen, and the fatal objection of certain classes to its employment. With due precautions, no other disease than that of vaccinia will be communicated. The distinguished English vaccinators, Dr. Marson, in 40,000 vaccinations; Dr. Leese, in as many more; Sir Wm. Jenner, in 13,000 sick children and adults in London, and Dr. West, of the Children's Hospital, in 26,000 children—all concur in saying that they have never seen any other diseases communicated with the vaccine, and that they disbelieve the popular reports that diseases are so communicated, nor is the child from whom the lymph is taken found to be suffering from the disease it is said to have imparted. Fresh lymph is always to be preferred when it can be obtained; but crusts may be used if such lymph is not to be had, and there is immediate necessity for vaccination. When practicable, it is desirable to vaccinate from arm to arm, with virus taken on quill-slips directly from a healthy individual to the arm of another.

Vaccination, by preventing small-pox, indirectly diminishes scrofulous diseases; and the death rate of most constitutional diseases, to say nothing of small-pox itself, has materially decreased as the practice of vaccination has increased; and not only has mortality been diminished, but life has been lengthened and population augmented. The exact reverse is true of the former practice of inoculation of small-pox.

There is no age at which a person should or should not be vaccinated, when a necessity exists for immediate protection against small-pox; but it is best done in early childhood, for then the irritation is less, and the child unable to relieve itself by scratching the part, which, with the irritation of the clothes, often interrupts the progress of the vesicle, causes it to discharge prematurely, and become inflamed; whereby a vaccination, which might have run its course naturally, becomes altered, and an inflamed angry sore is pro-

duced, leaving a deformed and ill-looking scar and a diminished protection. Matter, too, taken from such a sore is worse than valueless. The age of three months is, on the whole, to be preferred. The most distinguished English authorities in vaccination, Simon, Marson, Seaton, and others, recommend, as preferable, and as ensuring greater ultimate protection, four or five separate good vesicles; and of these, in taking virus for the purpose of vaccinating others, one at least should remain untouched.

The utmost care should be taken, in the performance and management of a first vaccination, to make it as nearly perfect, regular, and exhaustive as possible; for upon this depends very much the after-susceptibility to small-pox, and it is very doubtful whether any amount of subsequent revaccination will fully compensate for the deficiency of the first.

The period for revaccination may be determined by circumstances; it never can be done too early or too promptly in persons exposed to small-pox, and it should be performed in every person soon after the age of puberty, however frequently it may be repeated at earlier or later periods of life. It may succeed at one time when it would not at another; indeed, it appears to be true that revaccination, as well as primary vaccination, actually takes more readily in some years than in others. "One thoroughly good vaccination to start with," says Seaton, "and one careful revaccination after puberty, are all that is necessary for protection as complete as any known proceeding can give against small-pox." After the twenty-fifth year of age the liability to small-pox in the well vaccinated is very small. Of the nearly 50,000 revaccinations in the Prussian army in the year 1833, only about one-third were perfectly successful; resembling, that is, the results of a primary vaccination so closely as scarcely to be distinguished from it; the remaining two-thirds being more or less modified, or failing entirely. In other trials on a large scale the success has not been as great. It should be remembered that secondary small-pox occurs on an average in about one per cent. of cases; and that while we urge revaccination both as a test of remaining receptivity to it and of further exhaustion of what may remain, it is well known that a single well performed vaccination, perfect in all respects, with few exceptions, suffices to secure for life an individual subjected to it. The small-pox has lost none of its malignity and virulence, and while unvaccinated persons are allowed to accumulate, it is vain to hope for any exemption from epidemics of greater or less extent. In times of epidemic prevalence of small-pox, all should encourage vaccination. Vaccination and revaccination are positive duties. In order to give complete and assured protection against small-pox, every person not recently and thoroughly vaccinated should be at once revaccinated, and in subsequent life should repeat this duty as often as every five or six years, until in adult life the repeated revaccination cease to have effect.

Dr. Theodore Walser then read an extended paper on "Quarantine Regulations," which we have already presented to our readers.

The Academy adjourned.

Stated Meeting, February 15, 1872.

Dr. E. R. Peaslee, President, in the Chair.

DISCUSSION ON QUARANTINE REGULATIONS.

The Secretary read a letter announcing the death of Charles A. Lee, M.D., of Peekskill, N. Y., a Fellow of the Academy.

Drs. W. C. Roberts and Elisha Harris spoke of his extensive acquirements and attainments in his profession, and how much he was esteemed as a teacher and editor of medical works. The interest he evinced in the management and treatment of the insane was particularly dwelt upon.

THE QUESTION OF QUARANTINE.

The President appointed Drs. Theo. Walser, Elisha Harris, J. C. Peters, Austin Flint, and John O. Stone as members of the Quarantine Committee, according to the subjoined Resolution passed at the previous meeting:—

Resolved, that a Committee of five members be appointed by the Academy, to examine and report such facts relating to Quarantine as will furnish the Academy a correct and useful record in regard to Sanitary duties, in controlling exotic diseases.

Dr. A. N. Bell, of Brooklyn, after some preliminary remarks, then spoke as follows: Assent to the application of quarantine necessarily involves the acceptance of certain propositions, which are, as yet, far from being beyond question. One of these questions, the *portability* of yellow-fever poison, has been incidentally considered to some extent recently before the Academy; and it is, perhaps, fortunate that the present subject has necessity for its application. Quarantine regulations, in all their bearings, depend upon our appreciation of epidemic diseases, and without accurate knowledge of the natural history of epidemic diseases—including of course those usually denominated contagious—it is altogether impossible to have an intelligent comprehension of the utility of quarantine. And this view of the subject, even at the outset, is not only discouraging but humiliating.

Who among us can confess to understand the natural history of any one of the epidemic diseases, which we would be likely to class as quarantinable?

What do we really know of the qualities and attributes of epidemic diseases? For it is only that which we know, that we should attempt to control. Of all the uncertainties in the history of the medical art, knowledge of epidemics takes the lead. That which has been learned and confidently asserted in one generation, or even in one year, is not infrequently contradicted in the next. But let us not despair, something has been learned; enough, it is hoped, to stimulate action and research in a fruitful field, and, at least, to try to apply the little we have learned.

All epidemics possess some attributes in common, such as alternating periods of development, decline, and disappearance. They are about equally liable to occur sporadically, or to prevail within the narrow limits of places to which they are most common—without tendency to spread beyond. And yet they all have their cycles, exhibit marked dispositions to multiply and diffuse themselves broadcast, and to become pestilential, and then again to return to their usual haunts, as if exhausted, or having died out, for the want of food, and a subclass seems to possess the quality of being antidotal to themselves. These characteristics are wonderfully analogous to our more accurate knowledge of certain living organisms, both in the animal and vegetable world.

The speaker noted some points in natural history, and remarked that we might follow out the self-antidotal effects of the whole category of the ferments, and appreciate their analogy to certain contagions.

But besides all this, each epidemic disease should be studied by itself; and all its attributes in relation to the circumstances of its existence, in common with, or in exception to, all the rest and to all other natural phenomena, not confined to one place, region, or coun-

try only, but through all its various vicissitudes, marking well its distinctive signs and properties, and the antecedent meteorological and local conditions.

Already has this kind of investigation progressed far enough for the acceptance of certain peculiarities, which, by common consent, exclude most epidemic diseases from quarantine restrictions. Of such are, measles, whooping-cough, scarlet fever, diphtheria, erysipelas, cerebro-spinal meningitis, and relapsing fever; and to these may be added typhoid fever, and the common forms of intermittent and remittent fevers. The reason for this exemption consists in the knowledge of their known persistence ordinarily, and permanent existence in most communities which they infest; or their continuance, at least, for months and years at a time, and for the most part—particularly the exanthems—their marked independence of ordinary local conditions, in respect to their general dissemination. These conditions place such affections outside of the capabilities of quarantine, consistent with reasonable burdens, and narrow it down to a final class, now commonly accepted as quarantinable, because they, too, have certain characteristics in common, and from the knowledge we possess of their natural history are, at least, partially restrainable by quarantine.

These are: *small-pox, typhus fever, yellow-fever*, and *cholera*. The common characteristic of them all is portability. Of their characteristics individually, scarcely could four diseases be selected more unlike each other. With respect to *small-pox*, nothing need here be said of its natural history. It will suffice to state, that the capabilities of quarantine to restrict it are so slight as compared with the universally accepted and only means, that quarantine for it should be wholly and exclusively restricted to the care of the sick, and the disinfection of clothing, baggage, and merchandise, including, of course, the vessel; and the vaccination of all persons recently exposed, or who have not recently had the disease. Immediately after vaccination and disinfection of clothing, all such persons should be allowed their freedom.

It should be taken for granted that every community protects itself against small-pox by vaccination; that this is an accepted recourse of internal hygiene which annuls the exceedingly slight danger from the practice herein advocated.

Typhus Fever.—In regard to this disease, if I remember correctly, I must take issue with Dr. Walser. Less portable, I have no doubt, than yellow-fever, but at least sufficiently so; in my judgment, to contaminate clothing and certain merchandise and, above all, vessels.

Aitkin says: "There is ample proof that typhus fever may be communicated by fomites—adhering to apartments, articles of clothing, and the like; and provided fresh air be excluded, it is known that such articles will retain the poison for a long time. Herein lies a fallacy which pervades the argument from cases to prove the generation of the disease *de novo*. The poison may be said (like that of small-pox) to be constantly in existence . . . ; that it is undoubtedly propagated from pre-existing foci, and by continuous succession. There are also good grounds for believing that typhus fever may be communicated, and even carried a great way, by *fomites*, or by articles of clothing strongly impregnated with the specific poison."

Murchison, also, gives a number of striking examples of the communication of typhus from *fomites;* and particularly the recent case of the Egyptian ship "Schah Gehald," at Liverpool, the crew of which disseminated the poison of typhus by their clothes and persons, although, he says, they had not the disease themselves. Subsequent investigation of this case by Dr. Parks and others showed that some of the men belonging to the ship had had the disease, and communicated it by its more usual means—personal contagion; but this fact does not impair the other, that it was also disseminated by the clothing of the well. Pringle, Lind, Bateman, Jacquot, and others give numerous examples of the persistence of typhus poison in rooms, attached to furniture, clothing, etc.; and Lind, in particular, of typhus-infected ships, which continued to impart this disease long after the original sick had been removed. Jacquot gives similar examples in his account of the Crimean typhus on board the French ships. A number of the French transport ships took infected troops from the Crimea to Constantinople. Among the passengers who embarked homeward, typhus frequently broke out, without any reason to suspect that it had spontaneous origin.

Lind mentions cases, where persons, not ill themselves, have by their clothing imparted the fever to whole ships' companies; and he also cites the danger to washerwomen and nurses from clothes and bedding.

Says Murchison, Woollen substances, in particular, are the most prone to absorb and retain animal exhalations, and most fitted to transmit typhus poison, and reprehends the use of street cabs for the conveyance of typhus patients.

Surely after such well-proven dangers—and more might be cited—the danger of contaminating certain articles of commerce, such as woollens, for example, in a badly typhus-infected ship, would hardly seem questionable.

Cholera.—By the epidemics of this disease during the last ten or twelve years, we have learned enough of its history to be quite certain that it is at least constrainable, if not controllable, by quarantine. It would be useless, in this presence, to rehearse the history of recent epidemics, and its now accepted mode of dissemination, or to cite the numerous examples of its *transportation*, not to say its portability—by both vessels and fomites.

If I am not mistaken, Dr. Walser would confine his quarantine regulations for this disease wholly to persons. The vessel in most cases, and the cargo in all, he regards as invulnerable. No doubt, this would be good practice in many cases, but most of us are sufficiently familiar with its fatal portability by means of personal clothing and baggage, and its extension from one vessel to others, and to shores in the vicinity; without contiguity, in Jaffa, Alexandria, and several other places in 1865–6. And all of us know the increased danger of stale cholera discharges within certain limits; and some of us, at least, know the extreme liability of these discharges to get adrift on board ship—and to spread and permeate, it may be (for we know not how small or how volatile this cholera poison is), not only every part of the ship but into the material of merchandise, as well as personal clothing.

All of this, to say the least, is perfectly consistent with the nature of cholera poison, to the extent of our knowledge, and it is to just that extent that I would apply the quarantine and disinfection of merchandise and vessels, as well as persons, in efforts to restrain cholera.

Yellow-Fever.—The natural history of this disease has recently been so ably presented by Dr. Nott, and its acceptance as one of the most quarantinable of diseases is so generally acknowledged, that little need be said of it in this connection. I avail myself, however, of this opportunity of strengthening my evidence in regard to the portability of the particular epidemic of 1847–8, which Dr. Nott quoted authority for pronouncing otherwise. On referring to certain records in my

possession for the year 1848, I find that the number of yellow-fever infected vessels from the 13th of March of that year to the end of December, a period of nine and a half months, was 44,—the largest number, I believe, on record for this port for any one year, with the single exception of 1856, when there were, from the 1st April to the 1st of August, 47.

Finally, in regard to quarantinable epidemics, as well as most others, it may be safely stated, *two* conditions are generally necessary to their introduction into most communities: The presence of the *special* poison; and the susceptibility of the *place* as well as persons to which the poison is applied. That, however rigid quarantine restrictions, if there be not also rigid internal cleanliness, quarantine is likely to be ineffectual.

Dr. Walser and others tell us that by the fumes of chlorine, sulphurous acid, iodine, bromine, vaporized carbolic acid, and such like, applied to the hold of a ship, or even to the outside surface of such a mass, it is disinfected. Impossible.

It may be freely conceded, that if the infected mass could be penetrated with chlorine, bromine, or iodine the living organic matter therein would be destroyed. Years of reflection and increased opportunities of testing its efficacy confirm all that I have hitherto advocated in regard to the use of steam as the only available means with which I am acquainted, for the disinfection of vessels under the circumstances described. Chlorine and other vapors that have been, and can be, added when deemed necessary, no doubt contribute to the potency of steam under extraordinary conditions, but, for the most part, they are unnecessary. For, while it is perfectly practicable to raise the water at the keelson and the mud in the limbers to a boiling temperature, there has as yet been no instance within my knowledge, of the revivication of infection after subjection to a temperature of 175° for a period of two hours.

Dr. Bell concluded his remarks by giving a brief abstract of the Merchants' new quarantine bill now before the legislature. Its chief improvement on the laws as they now obtain consists in doing away with most of the abuses pointed out by Dr. Walser, such as the interminable detentions, abuses of lighterage, etc., but retains the clause in regard to all foreign vessels being subject to visitation. This he approved of, not for the reason given by Dr. Walser for its first enactment in 1856, to make the Health office lucrative, but because of the greater liability of vessels from foreign ports to infection, and the necessity for exacting cleanliness. The proposed law provided that such vessels, having no disease on board, shall be detained no longer than requisite for due examination in this respect. It also makes a distinction between the treatment of vessels and merchandise infected with the different quarantinable diseases; exempting the merchandise of vessels with small-pox and typhus fever from lighterage, and subjecting that of vessels with cholera to lighterage only under exceedingly rare conditions. Cape Henry had been substituted for Cape Henlopen, in the latitude, and May for April, in the scope of restrictions. The Board of Appeal has been changed by adding to the Commissioners of Quarantine the presiding officers of the Chamber of Commerce and the Ship-owners' Association.

Upon the whole, the speaker considered the proposed law a great improvement, while it was a substantial contradiction to allegations that had been made against the merchants of New York, that they are unwilling to submit to just quarantine restrictions.

Dr. Elisha Harris, in making the inquiry, How much danger is there from these exotic diseases?—said that having answered that, how is it that we exact so much from the ship if there is so much danger from the diseases? He thought the danger from yellow-fever was exaggerated and misstated. Only two per cent. of the vessels coming from infected ports have been really found subject to suspicion. If two per cent. is the true amount, this aspect of medical responsibility to the public is not really understood and appreciated. None of the quarantine laws are based on sound reason, much less on medical science. The public should be protected from a medical point of view. The speaker was pleased with the spirit manifested by medical men for advancing the public interests, and the relief of burdens, and advocated more organization of sanitary authorities.

In regard to the reform bill now before the legislature, the trouble was that the management rested in the hands of members outside of the medical profession, with the exception of Dr. Bell. The Board of Appeals was so made up, that if the physician was necessarily absent, not a medical man would be represented.

The subject of quarantine has assumed a new aspect. According to Pettenkofer, quarantine does not prevent cholera from going from place to place. It is the easiest thing in the world to get up a panic in regard to quarantine. If the sanitary authorites of the cities of New York and Brooklyn were consulted, in reference to the framing of quarantine laws, and matters pertaining to them, it would be well; but the whole management is outside of them He contended that nine-tenths of all the detentions to ships could be prevented if all that was known could be applied. This placing the whole external measures of hygiene outside of medical management has the effect of exhibiting the profession in an erroneous light.

Dr. Walser remarked that typhus fever was scarcely known in Continental Europe. He could not see how typhus and other eruptive diseases could infect the vessel and cargo. During his long experience not a single case of cholera was known to originate from vessel or cargo. In vessels with typhus fever on board, disinfection should be confined to clothing.

He would concur with Dr. Harris, that all quarantine laws are worse than useless unless they are national in their character. Quarantine regulations are made odious, for the reason that the subject has become a political hobby and a source of annoyance to private parties.

Dr. Harris would not depreciate the importance of using vigor in the prevention of disease, if faithful men are on guard and report truths. Dr. Walser himself could state that, when on duty at the Health office, strong influences were brought to bear to keep the truth back, as it was for the best interests of other than medical men to give the facts. What is now needed is a medical local organization competent to grasp the subject.

In regard to the application of steam as a disinfectant, Dr. Walser said that he applied steam in one case for thirty minutes, and the whole veneering of the cabin came off. He never tried it again.

Dr. Bell asked if the disease was not killed notwithstanding the loss of the veneering. The destruction of paint and veneering is of little consequence in comparison to the detention of vessels. The application of steam only takes two or three hours.

He stated that the majority of merchants were willing to regard the necessity of quarantine, and were desirous of submitting the matter to intelligent physicians.

Dr. John C. Peters:—As regards the quarantine of small-pox, I disagree with Dr. Bell when he assumes

that merchandise on board the infected vessel should be disinfected; it is only necessary to thoroughly cleanse and disinfect the persons, bed and body clothing, and baggage of the sick persons; vaccinate all the rest, and thoroughly cleanse and disinfect those parts of the vessel which have been occupied by those sick with varioloid or small-pox. The cleansing of the hair and head of the varioloid convalescent is of the greatest importance: every crust and scab should be removed from the scalp, and the head should be thoroughly cleansed and disinfected before the person is allowed to mingle with others or to land. The whole person, head, hair, and all, should be repeatedly soaped, washed, cleansed, and purified.

I also dissent from Dr. Bell's assumptions that the poison of typhus fever adheres to merchandise on shipboard with any tenacity; the little that may cling to bales, boxes, or barrels is quickly dispersed by comparatively slight exposure to fresh air. But the persons, bed and body clothing, and baggage of typhus-fever patients require the most thorough cleansing, soaping, and disinfection, and even steaming or fumigation is not amiss.

I also deny that any of the cargo becomes affected in cholera ships. The persons, clothing, baggage of cholera patients, and those portions of the ship occupied by them should be most thoroughly cleansed and purified, as should the baggage and effects of all those coming from cholera ports. Water closets, cuddy holes, latrines, and all personal conveniences, and the sides of the vessel, should be thoroughly cleansed and disinfected, as well as the steerage and all parts of the ship previously occupied by cholera patients.

I am convinced that all the precautions which are required against scarlet and typhus fever, small-pox, and cholera should be enforced against the persons, clothing, and baggage of yellow-fever patients; and that yellow-fever ships should be more thoroughly cleansed, disinfected, and fumigated than any others; but even in these cases the cargo, even if it consist of coffee, sugar, molasses, etc., etc., is rarely or never infected. The best way of disposing of a yellow-fever or cholera ship is to unload its cargo as rapidly as possible, with the full assurance that no disease will be conveyed by any portion of the cargo to the neighboring shore. The ship could then be very rapidly purified, and made ready for another cargo, or could be sent off in ballast to the place from whence it came.

New York harbor, by the establishment of the lower quarantine, now escapes from the greatest of all dangers, that to which it had always been subjected previously, viz., the contamination of its waters by the presence of cholera, typhus fever, small-pox, or yellow-fever from ships. It is not only possible but probable, as suggested by Dr. Bell, that cholera, typhus and yellow-fever ships bring in their holds, or rather in the spaces between their inner and outer plankings, an enormous quantity of cholera, or yellow or typhus fever filth which has soaked into them from the filthy docks in which they lay while loading. Again, it is equally true that a great deal of such filth drains down from the decks and steerage into these inter-rib spaces, if the disease breaks out with any intensity on shipboard. This is pumped over the decks with the bilge water, and contaminates the surrounding harbors and anchoring places. Again, all the discharges of cholera, typhus and yellow fever patients, and all their refuse, used to pass, without disinfection, into the waters of the harbor, especially into the bays and shallow places where vessels at quarantine usually anchor. It is very well known that persons bathing in these waters would contract disease very readily; and several instances have become historical, in which gales of wind threw these contaminated waters upon the Staten, Long, and Governor's Island shores, and occasioned wide-spread epidemics of yellow-fever and other diseases.

From the most of these dangers we are now happily released by the removal of quarantine down below the Narrows. It only remains to release commerce from the unnecessary delays, burdens, and fleecings which have so long been mercilessly heaped upon it in the name of Hygiene and Medical Science.

Dr. W. C. Roberts, Vice-President, remarked that the question of the contagiousness or non-contagiousness of yellow-fever was one of the most interesting and practically important features in its history; and he should very much have liked to lay before the Academy some observations he had prepared, from reading and reflection, on the subject. These he hoped to have a future opportunity of submitting to his professional brethren.

Insusceptible, perhaps, of positive proof, it was only from a certain line of argument in relation to contagion, as applied to this as well as to every other contagious disease in the catalogue, that that of yellow-fever could be inferred.

The study of the history of the disease, the speaker said, presented the curious anomaly of a large number of physicians, who, having for a long time been firmly convinced, from personal observation, of its contagiousness, had renounced that opinion and embraced the opposite; of many, and most, it must be acknowledged, who, denying its contagiousness and believing in its local origin, looked with doubt upon quarantine regulations for its exclusion; of men who believe in the specific cause and nature of yellow-fever; and of others, again, who see in it little or no difference from bilious fevers of a high grade, and doubt of its specific nature. Others, again, believe, that although originally non-specific and non-contagious, it may, under certain circumstances, become such; and that, even on a voyage, the air in a dirty hold, especially with sickness on board, might contract contagious properties. All these views are maintained by able men, and by seemingly convincing arguments. The contagionists affirm the origin of the disease from infected vessels; adduce *proofs* of its communication from the sick to the well, even in pure atmospheres; and adduce such examples, by way of illustration, as would be deemed conclusive in regard to any contagious disease acknowledged to be such. The non-contagionists deny its importation, or not, and confine themselves to showing that in numerous instances it was not disseminated, nor caught under favoring circumstances, etc.; the positive assertions of the one class, once the most numerous, being counterpoised by the negative statements of the other.

Dr. La Roche, in his elaborate work on Yellow Fever, which contains about all that has been written on the subject, devotes to "proofs of contagion" fifteen pages, on reading which, one would suppose the question definitely settled; and three hundred and fifty pages to the opposite view—showing, not what yellow-fever *did* do on occasions of its occurrence, but what it did *not* do. Many of his "proofs" of non-contagion are inconclusive; some not apposite, and some not true: probabilities only opposed, to what others might affirm to be clearly established facts. Upon the subject of actual contagion he scarcely touches.

Believing the disease to be one originating from specific causes, of specific nature, distinct from others even similar in character, and having, as he believes, the power to show instances of personal contagion strong enough to insure conviction in this or any other disease of specifically contagious nature; and

taking into view the interesting and practically important character of the investigation, the Doctor hoped to be able, at some future period, to lay the results of his inquiries before the medical profession for a verdict on their merits.

Which is the safer for individuals and communities, to admit and act upon the idea of its contagiousness, or to disregard it and risk the consequences?

The President announced that Dr. E. G. Loring would read, at the next meeting of the Academy, March 7, a paper on "Modern Methods of Extraction."

The Academy then adjourned.

Correspondence.

A FATUOUS PROFESSION AND INFAMOUS MEDICAL COLLEGES.

To the Editor of the Medical Record.

Sir—Some highly respected and unquestionably honest members of our profession read a report relative to medical education at the last meeting of the Medical Society of the State of New York. (See the Record for Feb. 15, 1872, page 559.) While I entirely sympathize with them in the objects of that report, I am convinced that the measures they propose are totally hopeless of desired results.

Whoever pleases can see that the report above alluded to adopts, and reproduces the impracticable scheme suggested by the Committee on Education of the American Medical Association, and printed nearly three years ago. I had occasion, in my paper read before the State Society at the same meeting, to quote from that report of the American Medical Association, simply to show that the whole history of the subject went to demonstrate that the plan proposed by that report is impracticable. It is therefore to be regretted that our State Society Committee should have been reduced to the necessity of even alluding to any such scheme for the moral and educational elevation of the profession.

If your readers will take the trouble to read the infelicitous and untruthful resolutions proposed by the State Society Committee (page 560), I have little doubt they will appreciate the point of the above remarks.

After reading those resolutions, will any one please to tell us how any board of censors therein provided or contemplated can secure the attendance before them of any proposed medical student?

What means have we for enforcing the fourth resolution, (see page 560)? It is morally certain that even among members of the county societies this resolution will be extensively disregarded; and as to the large number and often respectable members of the profession not members of county societies, it will of course be nugatory. What, for example, can the censors do, under the provisions of this resolution, with reference to the students of one of our most distinguished teachers who, by accident or otherwise, does not belong, by virtue of membership, to any county medical society?

But the most striking failure of the report and its resolutions is found in the complete want of any provision for the cases of medical colleges which become so venal as for a few paltry dollars to scandalize the honest and industrious students they may have, and degrade and outrage professional feeling by issuing diplomas to, or even matriculating, creatures who, in open court, not only perjure themselves in the vilest manner, but who declare, under oath, that for years they have lived upon a practice obtained through newspaper advertisements and by means of cards and circulars of the most debased and criminal character, distributed in the street cars.

This is by no means an imaginary case, as the following newspaper advertisement, of a recent graduate of a once respectable and still prominent medical college of the city of New York, will attest:

"Dr. ——. Infallible Pills for Female Obstructions. Twenty years' practical experience have encouraged me to introduce an article long needed. These pills will surely produce the desired effect, and need no further recommendation.

"For sale by druggists generally.

"For particular information apply to the doctor's office, No. —— avenue, between —— and ——- streets. Private office, No. — —— street. From 7 to 9 P.M."

Of course, the most careful and honorable schools are liable to imposition; but of this liability I have no other occasion to speak in this connection than to assure your readers that there was no such deception practised in the instance above alluded to. The faculty were fully informed in all the details of the case. They had the phonographer's report of the declaration under oath; they had the original newspaper advertisements, and they had an abundant individual evidence in support of charges of most immoral and criminal character. Notwithstanding all this, a few dollars have, within the last few weeks, placed the name of such a wretch in the list of the graduates of one of our New York medical colleges. No one will, of course, envy that college its acquisition.

I have named neither college nor individual; but I am ready to do so at any moment the public and professional good appears, in my judgment, to demand it.

Besides such outrageous acts, it is credibly stated that this same college advocates the propriety, and follows the practice, of selling their diplomas to persons living in distant parts of the State, on the simple statement of the person seeking it, without any presentation of certificate or credentials.

The college, and the case above alluded to, are notorious; and as a consequence of these disreputable acts, its better class of students are highly indignant, and will abandon the institution.

While honesty and morality are the best policy, they are by no means always observed, even where it is so clearly politic, as in the case of medical colleges.

Now, acts like that above alluded to are so frequently committed by colleges—more eager to secure a few dollars than to shun infamy—and so well known by the gentlemen signing the report, that it is a matter of surprise they should have seriously entertained an idea that the scheme provided in their resolutions reached, or could remedy materially, any evil. None but the fatuous can fail to see, that while totally venal and corrupt medical colleges have control of licenses to practise, medical society resolutions of this kind will not only be in vain, but be simple expressions of imbecility. Indeed, this is so well known, that one who moves a medical society resolution, in any other than a strictly society matter, exposes himself to ridicule. Outside of the society they have no significance, no influence. This will certainly be the result of any attempt to carry out the resolution referred to. (Page 560.)

But professional fatuity did not stop, at the late meeting of the State Society, with these resolutions. On page 558 Record, the society resolved again—to do what? to disapprove the only even hopeful measure

proposed in modern times to elevate and control medical education, viz., by invoking the strong arm of the law. Not to say anything about general professional opinion regarding this society resolution, it may be well for us to know, that the lay opinion of it is by no means complimentary to the profession. By it the State Society has, so far as any of its resolutions could, placed the profession before the public on the same footing as the quacks and the criminal practitioners of the country; while, to our shame be it said, the ignored so-called new schools of "pathies," have taken quite the opposite course—have accepted the proposed measure as one which, though it confers upon them no privileges they do not now legally possess, gives material additional power to be used for the public interest.

I need say no more to explain my text.

STEPHEN ROGERS.

CEREBRO-SPINAL MENINGITIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—The rumor that epidemic cerebro-spinal meningitis has appeared in some portions of this State, and the announcement that some cases have been reported to the Board of Health, induces me to write a few lines, with the hope of calling the attention of medical practitioners, who may have the opportunity of seeing this disease, to some details of treatment, and especially to the use of the ordeal bean of calabar, which I believe has been of service to me in the management of a recent limited epidemic.

Since the beginning of November last I have treated forty cases of cerebro-spinal meningitis. Twenty-nine were well-marked typical cases. The ages of my patients ranged from 3 to 16 years. Four died: and one is not yet out of danger. As this epidemic occurred under peculiar circumstances, and presented many features which may be of interest to the profession, I propose to publish soon a full report.

The therapeutics of this disease are notoriously unsatisfactory. The mortality of reported epidemics ranges from 30 to 75 per cent. The death-rate of my cases is only 10 per cent. But their number is too small to allow any legitimate conclusion to be drawn from such limited statistics as to the value of any particular treatment. I anticipate my report, therefore, by this preliminary statement, that others may not miss an opportunity of testing the value of the remedies I have employed.

Waiving for the present all discussion concerning the nosology, etiology, pathology, and morbid anatomy of cerebro-spinal meningitis, I may be permitted to state that the most salient and central feature of this disease seemed to me to be an enormously increased reflex irritability of the nervous system, with an attendant paralysis of some branches of the sympatheticus. In studying my first case it occurred to me that calabar bean, which ophthalmologists use in eye-diseases dependent upon an irregular or interrupted innervation of the dioptric apparatus, and which lately has acquired considerable reputation in the treatment of various forms of tetanus, might be of use in this disease, the symptomatology of which is so largely made up by paretic and tetanoid phenomena.

At first I used the tincture of calabar bean, but afterwards I succeeded in procuring the extract. The extract was manufactured by Hazard and Caswell, 2½ drachms of which are equal to 2 ounces of the bean. I had one drachm rubbed up in glycerine and gave 2–5 drops at a dose.

I administered this drug in every case, as soon as tetanic contractions or apparent paralysis of the sphincter iridis appeared; except in two fatal cases, one of which terminated very rapidly, the other occurred before I had obtained the extract and after the tincture was exhausted.

In the great majority of cases the drug seemed to exert a favorable influence upon the symptoms which it was intended to control. In a few of the milder cases, where there was rather a contracted pupil, I administered atropia in pretty full doses, without, however, influencing the general course of the disease.

In the onset of the attack the symptoms are generally so violent, cephalalgia and rachialgia so severe and distressing, the skin and mucous membranes so congested, that depletion seems the one thing indicated, and yet I have resisted every temptation to abstract blood. I have neither bled, nor leeched, nor cupped, nor blistered. Ice in bladders to head and neck mitigated the pain and proved grateful to the patient.

Cathartics I used very moderately, not intending to produce any revulsive effect upon the bowels.

I had no reason to be dissatisfied with this treatment, when afterward, in some of the protracted cases, a prostration set in as extreme as the precedent violence, and a degree of emaciation followed which rivalled the marasmus of the everlasting gastro-intestinal catarrh of starveling foundlings.

In the first days, or whenever, in the course of the disease, there was great restlessness, or violent jactation, I administered moderate doses of chloral hydrate, 10–15 grains, repeated as required. Morphine I gave only in one case where ice seemed unpleasant and headache was worse.

Although there is a certain rhythm and periodicity in the progress of this disease, I have seen no reason for giving quinine until after convalescence was established, and then, in combination with iron, it doubtless proves beneficial in re-establishing the vigor of the system.

In most of the cases periods of coma follow or alternate with spasms and jactations. In such cases I have found the iodide of potassium of service. But this drug must be administered with a bold and liberal hand. I have given from 2 scruples to a drachm in 24 hours; generally alternating it with the extract of calabar bean, so that my patients received every two hours either a dose of calabar (2–5 drops) or a dose of pot. iod. gr. 6–10.

Cerebro-spinal meningitis is not a self-limited disease; it is protean in its manifestations; probably more frightful in its phenomena than severe in its anatomical lesions,—at least in a majority of cases,—and offers, therefore, a hopeful field to the therapeutists, although few victories have as yet been won. To induce physicians to make new trials I have ventured to state briefly the method of treatment I have pursued; so far as its results go, I believe they are more favorable than any that have been obtained.

In general hygiene little could be done in the persent state of our knowledge as to the cause of the disease. I have used carbolic acid as a disinfectant, and internally to some extent.

In concluding these lines I wish to express my gratitude to Professor Jacobi, who had the extreme kindness to visit my patients with me, and to whose profound knowledge of the diseases of childhood and skilful application of modern therapeutics I am indebted for much valuable advice.

Very truly yours,

C. F. RODENSTEIN, M.D.

WESTCHESTER, March, 1872.

Medical Items and News.

College of Physicians and Surgeons.—The sixty-fifth Annual Commencement took place at Steinway Hall, February 28. After a prayer by the Rev. Dr. Hutton, President Delafield conferred diplomas upon seventy-eight graduates.

Prof. Dalton announced the following award of prizes:—

Faculty prizes for the best two Inaugural Theses: first prize, of fifty dollars, to William Tillinghast Bull, A.B., of Newport, R. I., for a thesis upon "Perityphlitis;" second prize, of twenty-five dollars, to Peter A. E. Boetzkes, of this city, for a thesis upon "Morbus Coxarius." The theses of the following gentlemen also received honorable mention: Edward K. Henschell, New York City, "Albuminuria;" George C. Gage, Mobile, Ala., "Yellow Fever;" John H. Seabury, Jamaica, L. I., "Acute Rheumatism;" T. Naylor Bradfield, Newark, N. J., "Diagnosis in Gynæcology;" and Cornelius Gilman Trow, Sunderland, Mass., "The Obstetric Use of Carbonic Acid."

Otis prize, of a case of surgical instruments, valued at fifty dollars, for the best report of the clinical and didactic lectures on venereal diseases, to F. W. Chapin, of New York City.

Alumni Association prize, of four hundred dollars, for the best essay presented by an alumnus, to Dr. Frank P. Foster, of this city, for an essay on "Experimental Study of Animal Vaccination."

The subjects selected for the Stevens Triennial Prize, of two hundred dollars, to be awarded at the Commencement next year, are: 1st. "The Sphygmograph, its Physiological and Pathological Indications;" 2d. "The Pathology, Symptoms, and Treatment of Convulsive Affections." This prize is open to universal competition. The Essays must be sent to the President of the College on or before January 1, 1873.

The valedictory address was given by Samuel Swift, Ph.B., M.D., of the graduating class; and the address to the graduates by Rev. Henry Ward Beecher. Some extracts from our notes of the latter, which we had proposed to give, are crowded out of this number.

Bellevue Hospital Medical College.—This college held its tenth Annual Commencement February 29th, at the Academy of Music. The Chaplain of the college, Rev. Dr. Beach, offered prayer, and administered the Hippocratic oath to a class of one hundred and twenty-nine graduates, who received their diplomas at the hands of the President, Dr. Isaac E. Taylor.

Prof. A. B. Crosby, M.D., addressed the graduates. He counselled them to consider their studies but just begun, and to pursue them not only with reference to the particular profession they had now entered, but quite as much with a view to that broader culture without which even their special department, however earnest their devotion to it, must be imperfectly comprehended in some of its most important relations. This culture must extend to the heart as well as to the head; nor must they neglect those social amenities and graces of manner whose absence might cheat the kindest feelings and the highest skill out of the best opportunities for their exercise. If that personal magnetism by which some men bring us irresistibly under their influence was not a thing to be acquired, still every one might learn to make his presence agreeable; and the physician would often leave behind him a more potent remedy than his prescription, in the memory of a bright greeting or a happy joke.

In the illness of the valedictorian, Benjamin L. Lothrop, A.B., M.D., his address was read by Dr. William Carr. Excellent music was furnished by an orchestra under Carl Bergmann's direction.

Medical Department of the University of New York.—The annual commencement of this Medical College was held on Tuesday evening, February 20, 1872, at Christian Association Hall, which was filled with a select audience. The exercises were opened with reading of the Scriptures by Rev. Prof. Benjamin N. Martin, D.D. Rev. Isaac Ferris, D.D., LL.D., Emeritus Chancellor of the University, offered prayer. Prof. John W. Draper, M.D., LL.D., conferred the degree of M.D. on seventy-five graduates. Certificates of Honor were given to eighteen graduates who had attended the spring, autumn, and winter courses of instruction. The Mott gold medal was awarded to Dr. J. V. Granger for the best anatomico-surgical preparation; the Mott silver medal to Dr. H. C. Munroe for the second best anatomico-surgical preparation; Prof. William H. Thomson's prize to Dr. L. P. Ensign for the best record of his clinics; Prof. Charles A. Budd's prize to Dr. G. H. Hammond for having passed the best examination in obstetrics; Prof. D. B. St. John Roosa's prize to Dr. J. A. Stephens for having passed the best examination on the eye and ear; Prof. F. D. Weisse's prize to Dr. H. S. Vanderhoof for the best records of his clinic on skin diseases.

The valedictory address to the graduates was given by Prof. William Darling, which was interspersed with amusing and interesting hints. Dr. R. J. Brevard, of the graduating class, delivered the closing address.

The New Health Officer.—The following letter has been addressed to Dr. S. O. Vanderpoel, the newly appointed Health Officer:—

New York, February 28, 1872.

S. Oakley Vanderpoel, M.D., Albany.

Dear Sir:—We have heard with the greatest satisfaction of your nomination by the Governor as Health Officer of the Port of New York. We regard it as most fortunate, for the credit and interests of all concerned, that the above office should be filled by an incumbent like yourself, fitted, by every personal and professional qualification, to perform its duties in the best possible manner. Possessing, as you do, the entire confidence and esteem of the profession, your confirmation and acceptance would be received with universal satisfaction. (Signed) Edward Delafield, M.D.; John T. Metcalfe, M.D.; Isaac E. Taylor, M.D.; T. Gaillard Thomas, M.D.; A. Clark, M.D.; W. H. Van Buren, M.D.; Willard Parker, M.D.; Alfred L. Loomis, M.D.; William Detmold, M.D.; T. M. Markoe, M.D.; A. Dubois, M.D.; Austin Flint, M.D.; Charles A. Budd, M.D.; J. C. Dalton, M.D.; John J. Crane, M.D.; H. B. Sands, M.D.; C. Henschel, M.D.; John G. Curtis, M.D.; Edward Fowler, M.D.; George A. Peters, M.D.; E. R. Peaslee, M.D.; W. H. Draper, M.D.; L. Ranney, M.D.; John O. Stone, M.D.; Gustavus A. Sabine, M.D.; C. F. Heywood, M.D.; Henry D. Noyes, M.D.

Lostorfer's Syphilitic Discovery.—Professor Wedl contests the discovery of peculiar bodies in syphilitic blood, and asserts that they are only masses of fatty particles and protoplasm, which are found in healthy blood.

Deaths from Small Pox in the seventeen chiefest towns in Great Britain, during the year past, amounted to the number of 13,174.

The Census of Rome.—The census of Rome, just completed, shows a population of 240,000.

Original Communications.

SOME DETAILS IN THE PATHOGENY OF PYÆMIA AND SEPTICÆMIA:

REMARKS BEFORE THE MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK,

By MARY C. PUTNAM, M.D.,

LECTURER ON MATERIA MEDICA IN THE WOMAN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY.

As I understand the object of this Association, it permits its younger members to submit the questions that may have especially interested them, to the judgment of others older and more experienced than themselves. This is why I venture to make some remarks on a subject, which a rather prolonged sojourn in the hospitals of a great metropolis has forced most prominently upon my own attention.

The study of putrid and purulent infection, though it originate in the province of the operative surgeon, immediately rises into the sphere of general pathology, and touches upon problems of the keenest interest to the physician. Moreover, by a singular fatality, the methods adopted to remedy the effects of accidents, expose to many of the same dangers as the accidents themselves; and operations for many diseases of internal origin accumulate upon the unfortunate patient the additional perils of an external traumatism. Finally, while men are more especially exposed to the superfluous traumatisms of war, women are compelled to incur the inevitable traumatism of childbirth; and the ultimate danger is in many cases the same.

To judge by certain assertions, one might suppose that this danger had been so much diminished by appropriate treatment, that it now presented no more practical interest than that of the plague. The admirers of Professor Lister have far surpassed his own confidence in the virtues of carbolic acid. In the *Dublin Quarterly* for 1869, Mr. McDonnell affirms that treatment by Lister's method has attained *perfection;* and that when a wound has been dressed with carbolic acid, and its arteries secured by torsion, it is almost certain to heal easily, while the temperature of the body does not rise above 100°. Lister himself, in his famous paper published in the *British Medical Journal* for 1867, is not so sanguine. He gives no statistics, but observes that since the employment of carbolic acid for the dressing of wounds, his wards, formerly the most unhealthy in the Glasgow infirmary, have become comparatively healthy, and that he no longer dreads, as before, the advent of compound fractures. In *St. George's Hospital Reports* for 1868, Mr. Holmes gives the result of experiments made with carbolic acid in forty cases. Lacerated wounds and abscesses did remarkably well under this treatment; all recovered. Of eight cases of compound fracture, four recovered and four died—two of pyæmia, one of tetanus, one, on fourth day, without metastatic abscesses, the case being complicated with renal disease. Mr. Holmes had twelve cases of incised wounds and operations, including two amputations of the breast, but only two involving section of the bones. One of these was a Chopart's amputation of the foot; patient recovered after an attack of erysipelas; the other, an amputation of a metacarpal bone, followed by death from pyæmia. In this case the patient had diseased kidneys.

In the last October number of the *Archives de Médecine*, Dr. Labbée reviews the English statistics, and points out that, even in Lister's wards, the results of carbolic acid treatment are much less brilliant than was at first supposed. Thus, previous to this treatment the deaths after amputations were 41 to 126, or 1 in 3; after its adoption, they were 30 in 80 cases, or 1 in 2.6. During the last six months Dr. Labbée had extensively employed carbolic acid, with the most scrupulous attention to the details insisted upon by Lister, and nevertheless nearly all his amputated patients had died. This lugubrious statement corresponds entirely with the facts that I have had an opportunity of observing closely. For at least three years the use of carbolic or phenic acid has been almost universal in the great surgical wards of the Paris hospitals; but the mortality has not been notably modified, and remains higher than that of London.

These remarks, with no pretension to statistical value, are merely intended to show that the antiseptic treatment is by no means infallible. The phenic acid of the moderns is not a panacea, any more than the famous sage of the ancients. It follows that the doctrine upon which its employment is based, is not sufficiently comprehensive to include all the cases to which it is applied. This doctrine is sometimes announced in a proposition that rather unfairly combines the opinions of Roser on miasms, and of Pasteur on animal germs. It is sometimes said that these germs constitute hospital miasms, and act either directly, being themselves absorbed into the blood, or indirectly, after having determined the putrefaction of traumatic fluids. The absorption of fluids thus putrefied is sufficient to account for the most various surgical accidents—phlebitis, erysipelas, pyæmia, septicæmia, hospital gangrene. In virtue of the assumed unity of their ætiology and of their nature, these several affections are asserted to be equally amenable to a single mode of treatment. This consists in the destruction of animal germs, first in the atmosphere, by purification of the air; second, upon the wound itself, by dressings with carbolic acid.

But, in the first place, the animal germs to which Pasteur attributes the mechanism of putrefaction do not exist merely in impure air, but even in tolerably pure air, unless it be absolutely free from animal or vegetable dust—such air, indeed, as may be brought from the summit of Mt. Blanc. To prevent putrescible substances from putrefying, it has been shown necessary to seal them hermetically, so as absolutely to exclude air. Donné experimented on an egg, which he carefully enveloped in cotton wool, and then obliquely pierced by a knitting-needle, previously heated to destroy any germs that might be clinging to it. By means of this puncture air was admitted to the interior of the egg, but only after having been filtered by the passage through cotton. The egg putrefied, as it will not do if it be covered with an impermeable varnish. But Pasteur asserted that the precautions taken had not been sufficiently severe; that it was possible to admit some of these ubiquitous infusoria during the manipulation of the experiment. How much more, then, in any wound not treated by absolute occlusion!

In the second place, the researches of Béchamp and Estor, communicated to the Académie des Sciences in 1868, indicate that, though the access of air be essential to putrefaction, yet the presence of bacteria in animal putrefying substances does not depend on their introduction from without, but on the development of germs already contained in the elements of the tissues themselves. Especially in the cells of the liver, both in man and in other animals, these observers have discovered certain spherical granules which they call microzymes. These

remain spherical as long as the organ is in health, and constitute a normal, necessary part of its elements. But when the tissues are separated from their vital connections and exposed to the air, these granules at first arrange themselves in strings, and finally assume the shape of moving or motionless rods, presenting all the appearance of the vibriones known as bacteria and bacteridia, and described by Davaine.* Fragments of liver placed in water containing either sugar or starch, showed a development of bacteria in twenty-four hours. But if immersed in ordinary water, the development was delayed five to thirteen days. Further, what is extremely important to notice, the addition of creasote or of phenic acid in no wise affected this proliferation of animal germs, unless it were made in a quantity sufficient to coagulate animal tissues. That these bacteria came from the microzymes into which they were seen to grade, and not from the surrounding air, seems proved by the fact that they were always discovered in the fragments of tissue before they appeared in the water in which these were immersed.

In the *Quarterly Journal of Microscopical Science* for last October, Burdon-Sanderson has shown, by most careful experiments, that the microzymes never come from the air. According to this writer, they frequently abound in water, so that a drop or two of ordinary spring water added to a test solution is sufficient to determine in it the development of microzymes and of bacteria. But if the water so added be boiled and the whole placed in a glass that has been superheated, no microzymes will appear, even though the liquid be left exposed to the air. In the latter case, however, torula-cells appear in as great abundance as if the liquid had not been boiled. It is thus shown that no connection exists between the microzymes destined to develop into bacteria and the torula-cells that multiply into fungi. The air is charged with these latter, while the former abound in animal and vegetable solids and fluids.

To test the influence of bacteria, apart from that of the morbid fluids with which they were associated in Davaine's experiments, Leplat and Jaillard† injected the veins of animals with fluids containing bacteria obtained from decomposing vegetable infusions. Such injections were productive of no inconvenience whatever. Analogous experiments were made by J. G. Richardson, as related in the *American Journal of Medical Sciences* for July, 1868, p. 291. He swallowed from one to four fluid ounces of water, rendered putrid by two or three days' contact with meat, and swarming with vibriones. A drop of blood drawn half an hour after the ingestion of one fluid ounce, presented only a single vibrio. But with a larger dose and an hour's interval the number greatly increased. Twelve were seen in as many minutes, and at one time there were three in one field. In two hours, however, these had entirely disappeared, their presence in the blood having occasioned no other inconvenience than slight headache, furred tongue, and some diarrhœa.

Thus, left to themselves in contact with healthy living tissues, vibriones are rapidly eliminated without causing any damage. Moreover, as Davaine observes, in a medium composed of substances in full putrefaction, these animalcula are also unable to sustain life. They live upon organic matter that is just beginning to decompose; they cannot determine the decomposition of living tissues; their germs cannot develop to the potency of bacteria unless they have free access to oxygen; finally, when the organic matter in which they are imbedded is dead, and resolved into inorganic elements, the vibriones die too. Hence, though Feltz and Cohn have discovered them in the fluids of putrefying wounds; though Ranvier has found them *near* the seat of a fractured bone affected with osteo-myelitis; though he has further found germ-granules in metastatic abscesses,—yet these marvellous little organisms cannot be rendered directly chargeable for all the accidents of putrid and purulent infection; nor their destruction be considered an assurance of security against these formidable complications of wounds. For, 1st, in air that has been sufficiently purified to avert certain forms of disease, as hospital gangrene and the more malignant kinds of septicæmia, the germinal matter of vibriones is still found in considerable abundance, so that animal fluids or tissues exposed to the air necessarily decompose.

2d. Positive experiments have shown that bacteria by themselves, though introduced into the blood, are not injurious. Further: Bergmann has shown that the dried residue of pus retains its toxic properties, though it have been heated to 212°, or treated by alcohol of 96 per cent.; and either procedure is accounted sufficient to destroy animal germs.*

The above-quoted experiments of Burdon-Sanderson tend to show that the vibriones of the air, which are a cause of putrefaction, differ essentially from the microzymes of animal fluids, whose development may be only an effect. But the development of these latter to bacteria may act like that of all other vibriones, in favoring putrefaction. Hence the accession of air to a wound would work in two ways: it would admit atmospheric germs, demonstrated agents of putrefaction; and it would furnish the oxygen requisite for the development of microzymes, probable agents of putrefaction. The one and the other class of vibriones—innocuous if themselves absorbed—only act by determining the alteration of traumatic fluids; and these once altered become toxic, though the causal germs be excluded or destroyed.

That the accidents resulting from wounds depend upon the introduction into the economy of substances formed upon them is shown: (*a*) because the artificial introduction of these same substances, by injection into the veins, is followed by the same symptoms as occur spontaneously when they are left long in contact with living membranes; (*b*) because direct experiment proves that the capacity of absorption from the surface of wounds is very great.

Two great classes of infection may be formed: 1st. That which depends upon primary absorption from the wound previous to the growth of granulations or the formation of pus; 2d. That which supervenes after suppuration, and the complete disappearance of traumatic fever. The first class constitutes septicæmia; the second, pyæmia, or purulent infection.

It is noteworthy that septicæmia is developed at a time when absorption from the wound is slowest; pyæmia, when it has begun to be most active. Demarquay has shown that an iodic solution placed on a recent wound will be absorbed in from fifteen minutes to an hour. But after application to a granulating wound, iodine may be detected in the urine and saliva in ten, eight, six, or even four, minutes. It would seem, therefore, that the accidents of septicæmia depend on the absorption of some substance more diffusible than that which is the origin of pyæmia, since it acts more quickly, though at a time when absorption is less active.

The wounds in which pure septicæmia originates may

* *Dictionnaire des Sciences Médicales*, Art. "Bacteries."
† *Comptes Rendus de l'Académie des Sciences*, 1867.

* On this last point, however, there is at least room for doubt, since Wyman's experiments (*Am. Jour. Sci.*, 1867) have shown that certain infusorial germs will retain their vitality even after four hours' boiling.

affect exclusively the soft tissues. Thus, in wards where pyæmia was the most frequent disease, I have seen septicæmia develop as a consequence of an operation for a double prolapsus of the uterus and rectum, where an attempt was made to extend the perinæum backwards by a suture that should include a part of the enormously distended anal sphincter.

Septicæmia is frequent after operations for strangulated hernia or the extirpation of tumors, and often complicates the peritonitis occasioned by ovariotomy. But in wards where pyæmia and septicæmia were both endemic, I have been struck with the exemption of patients who had suffered amputation of the mammary gland. On the other hand, the extirpation of a fibroplastic tumor from the deltoid muscle was followed by a typical development of septicæmia. The traumatic fever set in within twenty-four hours after the operation, and, instead of abating, persisted, and gradually rose into all the violence of the septicæmic fever.

This form of surgical fever is frequent as a consequence of diffused acute phlegmon of cellular tissue, even when this is unaccompanied by osteo-myelitis. It constitutes those peculiarly malignant forms of puerperal fever where death supervenes with great rapidity, and where, after death, the uterus presents no trace of phlebitis or of lymphangitis. These cases are exceptional.

It is a very remarkable circumstance that gunshot wounds, so excessively dangerous when they affect the bones, are so frequently innocuous when confined to the soft tissues. I had abundant opportunity for observing this fact in the case of numerous shell wounds that came under my observation during the siege of Paris. In wards where acute diffused phlegmons frequently proved fatal by generating septicæmia, flesh-wounds caused by the explosion of shells healed readily, even though, as in one case, the victim was a woman six months pregnant, and miscarried after a triple injury in face, thigh, and leg.

A curious case of impunity, even though the bone was involved, was that of another woman who had been for four years an inmate of the hospital on account of chronic rheumatism in shoulder, wrist, and knee-joints, all of which were more or less completely ankylosed. During the bombardment, a shell exploded in the hospital ward, and carried off this patient's right arm about three inches below the shoulder-joint. It was a very clean amputation, with very slight hæmorrhage; and but little trimming of the wound was needed to make a neat stump, which was speedily covered by fleshy granulations. Not merely did the patient escape without any signs of septicæmia or purulent infection; she even had no traumatic fever. I attributed this remarkable exemption to the pre-existence of chronic adhesive inflammation, which had rendered the tissues—lymphatic, cellular, osseous, and to a certain extent even the veins—impermeable to the septic material arising from the traumatism.

The behavior of gunshot flesh wounds resembles that of those made with caustics as compared with those made by the bistoury. It is not my province to insist upon the practical advantages of the method so eulogized by Maisonneuve, but their bearing upon the theory of septic and purulent infection is of importance. The facts tend to show that tissues killed outright, by chloride of zinc or the actual cautery, present far less chances of infection than those that die slowly and, during a long period, offer to absorption the successive products of their decomposition. They appear, moreover, to block up the roads of absorption, and not to afford the media for diffusion constituted by loose diffluent tissues.

Septic absorption occurs to a greater or less extent whenever decomposing animal matter is brought in contact with living membranes, and seems to be independent of the state of the veins.

The condition of the lymphatics is of much more importance. For at the time that septicæmia develops, the lymphatics, torn by the traumatism, gape open into the wound, while later they are closed by fleshy granulations. Septicæmia, which precedes the formation of these granulations, likewise, in typical cases, precedes the formation of pus. This does not normally occur before the third day; and if symptoms of septic poisoning have appeared previous to its establishment, suppuration may be indefinitely delayed, or the pus be replaced by a thin sanious liquid, in which pus-corpuscles are rare. According to Robin, the decomposition of pus is always a consequence of the generalized infection, and not its cause.

As might be inferred from this apparent connection with the lymphatic system, the full development of septicæmia is often preceded by a lymphangitis. But it is extremely curious to notice that, should this lymphangitis be immediately followed by tumefaction or phlegmon of the nearest lymphatic glands, or by an attack of erysipelas, the general infection seems to be averted. I have in my notes three cases of compound injuries of the fingers, followed by abscess in the axilla, which in one case had been preceded by a subacute phlegmon of the arm; in another, by the red streaks of superficial lymphangitis; in the third, by a probable affection of the deep lymphatics. All these cases resulted in recovery, in the same wards where patients affected with quite similar injuries were constantly succumbing with symptoms of septico-pyæmia. The occurrence of erysipelas seems also frequently to ward off the graver affection. In two cases of carbuncle treated by extirpation, the occurrence of a chill, in connection with a sudden drying and glazing of the wound, was regarded as an ominous forerunner of septic infection, until the advent of a local erysipelas unexpectedly changed the prognosis. In another case, an operation for strangulated hernia in a woman was followed by an attack of erysipelas on the face, from which the patient recovered. She subsequently succumbed to exhaustion, but never presented either symptoms or lesions of putrid or purulent infection. These facts, and certain statistics showing the epidemic alternation of erysipelas with graver surgical affections, bear testimony in favor of the theory that ascribes erysipelas to a diffused inflammation of the lymphatics of the skin, caused by the passage through them of irritating substances. It is upon this theory that Maisonneuve has based his treatment of erysipelas by application of a blister directly to the inflamed surface, for the purpose of drawing off septic material in a profuse discharge of serosity.

The succession of symptoms in septicæmia generally occurs as follows: The traumatic fever, instead of abating, persists, or abates only imperfectly. The suppuration, that should have set in on the third day, is delayed; and sometimes the wound becomes glazed and dry, or points of gangrene appear in tissues that seemed at first sufficiently vitalized. Sometimes, as was the case with the patient submitted to a perinæorrhaphy, a fugitive local erysipelas appears, to disappear after a few hours. About the fourth day occurs a single chill, often quite violent, immediately followed by a notable rise of temperature. By the fifth day the sutures in the wound give way, and the tissues begin to melt down into an increasingly putrescent detritus. At the same time the pain of the wound is diminished, and this local blunting of the sensibility

rapidly extends to the entire nervous system. The patient becomes absorbed, indifferent, finally agitated and delirious. The delirium is sometimes muttering, often violent. The fever is remarkable for its continuance; morning remissions are slight. Under this continued fever the body emaciates; the cheeks become excavated, and covered with a dry parched flush; the eyes are injected; the tongue and lips retracted and blackened with fuliginosities; the whole aspect of the patient recalls that of typhoid fever, and the occurrence of diarrhœa completes the resemblance.

The peculiar circumstance about the pathological anatomy of pure septicæmia is its negative character. There is no trace of phlebitis, thrombi, or metastatic abscesses. The veins are all permeable, but filled with diffluent black blood like molasses. The viscera are nearly all softened and congested, as in typhus.

In artificial septicæmia, induced by the injection of putrid matters into the veins, there is often diffused pneumonia, or there may be patches of gangrene in the lungs. The most notable lesion, however, exists in the intestinal mucous membrane, which is tumefied, hyperæmic, and softened. This lesion corresponds to the sanguinolent diarrhœa, which is an invariable symptom during life, and both lesion and symptom point to an effort at elimination of the poison by the intestinal tube. That the lesion is so extremely marked in animals, while it is slight or wanting in human victims, indicates that the effort at elimination is greater in the former case than the latter, and helps to explain, therefore, the greater resistance of dogs to the disease.

Finally, a very notable peculiarity of septicæmia is its variable degree of intensity—variable as the conditions which may give rise to it. There is the terrible septicæmia of malignant forms of puerperal fever, that destroys life in a few days; there are the much milder forms, that almost invariably occur when decomposing animal fluids are brought in contact with any surface of the body in such a way that any part of them may be absorbed. The retention of a piece of the placenta in the uterus will give rise to all the symptoms of an incipient septic fever, as I had an opportunity to observe in a case the other day. Nay, even in perfectly normal conditions, recent accurate observations have noted a rise of temperature as a general occurrence about twelve hours after parturition. This phenomenon is precisely analogous to the well-known traumatic fever, and the elementary conditions are the same, namely, the contact of decomposing non-purulent fluids with living membranes capable of absorption.

In these cases, the general disease seems to be directly connected with the wounds, and this, not in virtue of the nervous shock they have inflicted, but of the decomposing liquids, or of some element in them, that they place in contact with live animal membranes. The essence of the general disease lies in the fever, or rise of temperature; and of all the causes that have been invoked to explain the rise of temperature in such cases, that of an acceleration of the molecular metamorphoses of the blood and tissues is infinitely the most probable. For the fever may be determined, either, as I have said, by contact with animal membranes of substances themselves undergoing rapid chemical metamorphoses, or by an injection of these same substances into the blood, as in Billroth's experiments.* In these experiments there was no chill, but the temperature rose immediately as high as 40.5° C., and other symptoms of septicæmia followed, as diarrhœa and great prostration. Recovery frequently took place.

In some cases, where the amount of injected material had been very large, death occurred, and then the only visceral lesions discoverable were diffused congestions, especially of the intestinal mucous membrane. From these experiments the gravity of septicæmia is shown to be in direct proportion to the amount of putrid matters thrown into the blood, although in every case they determined a rise of temperature. Below a certain limit of quantity, they could be supported; but above that limit, they occasioned more violent symptoms, which finally proved fatal. This gradation corresponds to that furnished by clinical experience—to the immense variety in the severity of septicæmic symptoms, which are least of all after normal parturition; greater after wounds, and in proportion to their extent; greatest of all when, long after the original shock, new tissues have sloughed by the invasion of hospital gangrene. There are, therefore, the strongest reasons for accepting the recent doctrine of Billroth, which interprets traumatic fever as a form of septicæmia, and septicæmia as a simple extension or aggravation of traumatic fever.

This analogy suggests that of numerous other affections in which septicæmia plays a prominent part, as hospital gangrene, carbuncle, malignant pustule, typhoid fever, variola, ulcerative endocarditis, even erysipelas when the effort at cutaneous elimination has proved unsuccessful. In all these cases the evolution of the affection seems to be connected with the presence in the blood of rapidly decomposing substances, whose metamorphoses accelerate those of the animal tissues, including the blood, and thus raise the temperature of the body.

It is in virtue of this rise of temperature that septicæmia is allied to pyæmia; for the injection of pus into the veins, even when it produces no other effect, generates fever as intense as that produced by the injection of putrid non-purulent fluids—fever which may end in death. In other respects the symptoms and march of pyæmia are quite different from those of septicæmia.

As every one knows, pyæmia originates most frequently in some lesion of bones, which places the wounded osseous tissue in immediate communication with the air. The larger the bone, the greater the danger, which is most to be dreaded after injuries of the femur. Who is not familiar with the train of events that, in such a fatally large number of cases, follows upon an amputation of the thigh? The patient may have recovered from the initial traumatic fever, and on the fourth or fifth day be apparently in very good condition. Suppuration, which set in on the third day, becomes profuse, but the pus remains thick, yellow, laudable, or only slightly offensive in smell. Thus, suppuration precedes the invasion of pyæmia, while the symptoms of septicæmia generally begin before the establishment of suppuration, or arrest it if pus be already formed.

The wound is extremely painful, and its sensitiveness seems to increase instead of diminishing. The process of dressing the wound throws the patient into an agony; but when this is over, he is comparatively comfortable, often extremely hopeful and sanguine. One day, generally between the fifth and tenth, the nurse observes that the patient has eaten less than usual. In reply to inquiries, however, he asserts, sometimes quite vehemently, that he is perfectly well. A day or two later he acknowledges having had a slight chill or fever, that he refers to only on account of the persistent questionings of the surgeon. Sometimes several days, even a week, will elapse before the chills are repeated; sometimes they follow in rapid succession, coming every day, or even twice and thrice a day. It is ex-

* *Archiv für Klinische Chirurgie*, 1862.

tremely rare that only one chill precedes the invasion of fever; and even then, this invasion only occurs after a certain interval. The chills are very apt to return after the establishment of fever, and checker its course in a way never seen in pure septicæmic infection.

The rise of temperature occurs sometimes after the complete subsidence of the traumatic fever, in notable contrast with that of typical cases of septicæmia. It is rarely as rapid, as intense, or as continued as in the latter case; for some time it presents very marked morning remission, and only gradually rises into continuity.

The appetite and strength fail, and the patient is conscious of his increasing weakness, and complains of it, as is never the case in septicæmia. Hence it seems much more notable. The skin and sclerotics assume the characteristic yellow hue, extremely unlike the red parched flush of septicæmia, and analogous to that of cancerous infection, with which Billroth compares it. It is one of the forms of jaundice described by Gubler, dependent on a destruction of red corpuscles in the blood. The tongue of the patient becomes dry, but never blackened by fuliginosities as in septicæmia. The intelligence remains clear, but the mind begins to be darkened by gloomy forebodings, by a semi-consciousness of the dissolution of vital forces already begun.

During this time the aspect of the wound is little changed, the suppuration is abundant, according to Billroth is increased, and my own observations accord with this statement. An extension of suppuration takes place, as the older writers would say, and is manifested in one or more of three different ways.

In the first place, cold abscesses may form in different parts of the cellular tissue, generally of the extremities, sometimes in the more decumbent portions of the trunk. In the second place, purulent effusions may take place into the articulations, or serous cavities, and that with extraordinary rapidity. This purulent arthritis is a very common manifestation of infection during the puerperal state. I remember one case especially, which I had an opportunity of observing at the clinique, that might be considered as a type of this class. The patient had had an attack of subacute metritis, which was subsiding, when she complained of pain in her left elbow-joint; and in the course of twenty-four hours the articulation became evidently filled with liquid, swollen, extremely tender, but without any inflammatory redness. The only other symptoms presented by the patient were diarrhœa, and a certain dulling of the intelligence. M. Depaul immediately pronounced a fatal prognosis, which was justified four or five days later by the death of the patient with all the symptoms of purulent infection.

These external suppurations, however, indicate a comparatively curable form of the disease, and, when manifestations of the infection are confined to the cellular tissue or the articulations, the patient may recover. I have seen three curious cases of this category. After a compound fracture of the tibia, a patient was affected with cold cellular abscesses in various parts of the body, and with purulent effusion into one of the knee-joints; yet he ultimately recovered.

In another case, also of compound fracture of the tibia, the patient had had three chills, and an abscess had developed in the thigh. After the administration of quinine, the course of the infection seemed to be arrested, and the patient recovered.

In a third case, the purulent infection had originated in an anthrax, which had been followed by abscesses in the breast, glutæal region, and leg, and by an effusion, probably purulent, in the knee-joint. Notwithstanding this multiple suppuration, the patient recovered, and the articular effusion was reabsorbed with the rapidity so remarkable in such cases.

These cases recall the experiments of Sédillot upon dogs, where injection of pus into the veins was followed by the development of external abscesses, but finally by recovery.

External suppuration or suppurative inflammation of serous cavities may, however, of itself prove fatal, as in a case that I saw at the Children's Hospital, where purulent infection is comparatively rare. A child four years old had been submitted to Chopart's amputation of the foot, on account of a fungous arthritis, accompanied by necrosis of some of the medio-tarsal bones. The first few days after the operation passed very well; then secondary fever set in, and was followed by symptoms of arthritis in both elbow-joints, and of double pleural effusion. Death occurred about a fortnight after the operation, and at the autopsy were found abundant purulent effusions in the articulations, in both pleural cavities and in the peritoneum. This purulent peritonitis had been latent and quite painless, and had probably taken place during the last days of existence, when sensibility was blunted. There were no traces of metastatic abscesses in lungs, liver, or spleen.

These metastatic visceral abscesses constitute the third form of generalized suppuration, and the lesion most characteristic of pyæmia. The invasion and march of the disease seems to coincide exactly with their development and evolution. To them is due the dyspnœa that occurs early in the disease, while that of septicæmia, dependent on the poisoning of the mass of the blood, does not supervene till later. The respirations are rarely below forty, sometimes as high as fifty or sixty. With the progress of one or the other of these suppurations, the prostration of strength increases. All the powers of life seem to be gradually dissolved apart from one another, and drift away separately before sinking down into the sea of nothingness that is rising to engulf them. Hence towards the close, a peculiar incoherence of the mental faculties and of speech, that is quite distinct from the delirium of septicæmia. The patient will interpolate absurdities in the midst of a conversation whose general tenor is reasonable; he has temporary hallucinations of vision; he loses all capacity for comparison, and consequently for astonishment; his mind resembles that of a person in the incipient stages of dementia.

This ataxia of the intelligence finally extends to the spinal and peripheric nervous system; there is carphologia, the wandering involuntary movements by which the patient seems vainly endeavoring to clutch at the life that is slipping away from him. Finally, consciousness is entirely gone—the patient lies on his back with his eyes closed, already half a corpse. I have seen one case where this condition was prolonged a month, and Mr. Paget relates similar cases of chronic pyæmia, where, as in Edgar Poe's story, the patient seems to have been magnetized when at the point of death, and his dissolution arrested, but left constantly imminent. It is during this last period that the suppuration on the wound diminishes.

The autopsy of patients who have succumbed to pyæmia reveals one or other of three characteristic lesions, and very frequently a combination of all of them: osteomyelitis; venous thrombi, with or without phlebitis; visceral abscesses, or purulent effusions into the articulations or serous cavities.

The osteo-myelitis, whose presence might have been inferred from the constancy with which pyæmia is associated with lesions of the bones, is extremely frequent. M. Ranvier, in an article published in the *Lyons Médicale* for last May, observes that he found it in all the

autopsies made at Val de Grâce during the siege. M. Gosselin, in his clinical lectures, always insisted upon this coincidence, and has referred to it again in the recent discussion at the French Academy. I have certainly had abundant opportunity to observe it myself.

This osteitis is always of the rarefying variety; the bony tissue is highly vascularized, and the surface of a section shows the trabeculæ to be red and softened, and the spaces they enclose enlarged, and filled with grumous sanguinolent matter. The medullary canal is filled with a vascularized pulpy mass, whence the fat has disappeared, a most noteworthy circumstance. A very characteristic detail is the projection of a portion of the mass from beyond the medullary canal.

Of less importance for the pathogeny of pyæmia is the thickening of the periosteum, and its frequent detachment from the bone by neoplastic material formed beneath it.

There are two noticeable facts about a bone in this condition: 1st. That all its cavities, both the medullary canal and the spaces between the trabeculæ, instead of being obstructed by solid clots, are filled with loose, pulpy, diffluent matter, exactly calculated to offer a medium of diffusion for liquids carrying solid particles in suspension. 2d. That the fatty matters of the medulla, so eminently adapted to rapid movements of chemical metamorphosis, are as ready for absorption as are the liquids on the surface of the original wound.

Not only is osteo-myelitis an almost invariable attendant on fatal cases of compound fracture, but it may constitute the sole perceptible cause of pyæmia, as when the latter supervenes upon an acute necrosis (so called), or even, under certain circumstances, upon simple fracture. I have observed an example of pyæmia in an old man affected with simple fracture of the neck of the femur which had begun to consolidate when he succumbed to the affection, at that time endemic in the ward. Billroth quotes a similar case; and Prescott Hewett records a third in the *Lancet* for 1867.

In another instance that I have seen, the pyæmia supervened upon a chronic otitis, accompanied by caries of the petrous bone. In all these cases, metastatic abscesses were formed in the lungs.

The second lesion that may be found in pyæmic autopsies is phlebitis. Billroth observed it twenty-eight times in eighty-four cases. As is well known, it is to phlebitis that Berard ascribes all the phenomena of purulent infection. The apprehensions of danger from this cause have been much diminished since Virchow has shown that the coagulation of blood in the veins is not its consequence but its cause, and that irritation directly applied to empty veins inflames the external coat, but leaves the inner tunic untouched. The inflammation of the inner coat is always a consequence of the softening of the coagulum that has formed in the cavity.

This softening, or suppuration as it has been called, takes place in two ways: 1st. By the molecular disintegration of the fibrin. 2d. By the penetration into its mass of pus cells, or white blood-corpuscles, that have wandered from blood-vessels or from purulent collections in the neighborhood of the thrombus. Hueter, in his chapter in *Billroth and Pitha's Surgery*, does not hesitate to admit this penetration, and considers it proved: (*a.*) By Cohnheim's experiments on the capacity of white blood-corpuscles to traverse the walls of capillaries and blood-vessels. (*b.*) By those of Recklinghausen, published in the *Archiv* of Virchow, and which show the contractility of pus cells, and of cells of connective tissue. (*c.*) By the experiments of Bubnoff, recorded in the *Centralblatt*, of 1867, there has been directly observed the passage into the thrombus of pus cells that had previously taken up granules of cinnabar. In this connection we may inquire whether the presence of the granules did not communicate a force of impulsion to the cells that they otherwise would not have possessed; and whether, therefore, pus cells that had become granular by commencing decomposition, would not be able to penetrate where others were shut out.

When, by the medium of a phlebitis, inflammation may be propagated from the wound to tissues of vital importance, the softening of the clot may prove immediately fatal. In the *Archives Générales* for 1871, Reverdin has pointed out that in anthrax of the face, inflammation of the facial veins may extend to the sinus of the dura mater, and excite a fatal meningitis.

Except in such special circumstances of contiguity, phlebitis remains a purely local affection, not only in such typical cases as that of inflamed varicose veins, but also in others where it seems to substitute itself for a general disease. Thus, during an epidemic of so-called puerperal fever, the patients affected with a well-defined metritis, or phlegmasia alba dolens, generally escape peritonitis or septic infection. Even the phlebitis that seems to have been generated by transport of pyrogenic material from a distant wound, may result in recovery, without signs of infection. I have seen one case where the extirpation, for cancer, of a mammary gland, was followed by phlebitis of the right leg—a real phlegmasia alba dolens, which retarded, but did not prevent recovery. So marked is the opposition between local adhesive phlebitis and pyæmia, that Sédillot treated incipient cases of the latter disease by cauterization over the veins leading from the wound, for the purpose of exciting inflammation and an effusion of plastic material that should erect a barrier against the absorption of putrid substances, or, as Sédillot maintained, of pus.

When the fibrinous coagulum remains hard, and obliterates the vein, no phlebitis ensues, as may be seen in ordinary varicose veins, or in the inopexia of cachectic diseases. The inflammation of the inner coat of the vein, as I have said, only occurs when the process of softening of the clot has extended the cavity first hollowed out in its centre, to the membrane limiting its periphery. It is infinitely probable that this process, which causes the phlebitis, is itself the cause of accidents of which the phlebitis is only an incident, because, on the one hand, these accidents coincide with the softening of thrombi, when little or no phlebitis exists; on the other hand, there are very rarely accidents with a less degree of softening, and a very intense degree of phlebitis.

The question of the influence of phlebitis in pyæmia resolves itself, therefore, into two others: 1st. The formation of thrombi; 2d. Their disintegration.

Now it is extremely noticeable that many of the circumstances which favor the development of thrombi are precisely those which seem almost essential to the development of pyæmia. As Weber observes, since every traumatism involves a solution of continuity of veins, and since this is necessarily followed by a coagulation of blood in their interior, the formation of thrombi is a necessary consequence of every wound. But in superficial wounds of the soft tissues, the vessels are small, and easily obliterated at their extremities. When larger vessels are torn, one of two things happens: Either the vessel flattens together above the clot, obliterating its extremity, and then the thrombus never projects into a free cavity; or the clot is prolonged as far as the nearest collateral vessel, and its extremity floats free in the stream, and in a space larger than its own diameter. When this last occurs in arteries, as is normally the case after ligature, no harm results, because

the stream of blood is not coming from the collateral, but passing down into it, and if any fragments are separated from the fibrinous clot they must be carried down to another point on the periphery of the vascular system. But in the case of a vein the conditions are reversed; the collateral current comes from the periphery, strikes the floating end of the coagulum, breaks off a fragment, and carries it towards the heart and lungs.

Of the conditions which favor the disintegration of the thrombus, the first, therefore, are those which expose its free end to be broken off mechanically. These conditions are two: length of the coagulum, and such a structure of the tissue surrounding the veins as is opposed to their collapse.

The length of the coagulum is increased: 1st. By whatever increases the amount of fibrin in the blood, or render its circulation sluggish, as abundant hæmorrhage, exhaustion from previous disease, privation, or old age. Weber attributes the rarity of true purulent infection among children to the activity of their circulation, which restricts the formation of thrombi. 2d. By the absence of valves in the veins. 3d. By the sudden suppression, through amputation, of an extensive vascular territory.

The two latter conditions are presented by the veins in the long bones, the last especially after amputation of the thigh, where, as is known, the liability to pyæmia is at its maximum.

In osseous tissue, and especially in that of the long bones, is also found the second general condition favoring long coagula, namely, a structure that prevents the veins from collapsing. Lining the pores of the bones, they are necessarily maintained distended, and this circumstance, which has been wrongly supposed to imply such gaping open into the wound as should permit the direct entrance of solid particles, really favors the formation of lengthy coagula, with all their consequences. The same condition may be presented by the sinuses of the uterus when that organ fails to contract sufficiently after parturition. Here again are no "open mouths," but tortuous vascular canals, in which collateral currents meet and cross each other in every direction, filled with loose fibrinous clots that offer media for diffusion, and are liable to disintegration.

The circumstances that favor the disintegration of the clot throughout its mass, constitute the second class of conditions which render thrombi dangerous.

1st. First among these is the osteo-myelitis, which we have already noticed as so generally existing in fatal cases of pyæmia. The local activity of the circulation, uncompensated by sufficient force in the central part of the system, on the one hand determines serous effusions into the clots; on another, creates collateral currents ready to carry down stream the fragments resulting from the disintegration. This effect is added to that proper to the inflammation itself.

2d. The softening of the clot is favored by the penetration into its mass either of pus cells already effused elsewhere; or of white corpuscles directly passing from the neighboring blood-vessels; or, finally, of putrid liquids. We have noticed that the penetration of pus cells, which could not in any wise be considered a phenomenon of absorption, would be probably favored by their granular and angular condition; and as this is peculiar to decomposing pus, the influence of the latter may be in part explained. As to the white blood-corpuscles, with which we have seen that a certain proportion of pus cells may be identified, the most common condition of their transudation is their previous stasis in capillaries, which has long been known to be one of the initial phenomena of inflammation. The well-demonstrated influence of intense local inflammation upon the development of pyæmic accidents, is thus in part accounted for by the penetration into the interior of thrombi of pus cells existing in the neighborhood. When such elements come from the tissues surrounding the thrombus, they penetrate it in virtue of the contractility demonstrated by Cohnheim and Recklinghausen. But, if they ever come from the surface of the wound—that is, penetrate from without inwards—they are diffused like other solid particles in the liquids which hold them in suspension.

Since, after the closure of the lymphatics, there are no open-mouthed vessels gaping into the wounds, and consequently the absorption of pus as such is impossible, this diffusion from the surface of the wound is regulated by the general laws of diffusion. Thus it will be greater when there is a stronger pressure without, such as may be exercised by tissues rendered tense by inflammation or by fibrous aponeuroses, and when this is combined with a diminution of the pressure within, as by a lowered tension in the blood-vessels. A liquid diffuses more easily when it is less dense, and especially when it contains less colloid or albuminous substances. Hence the thin sanious fluids first formed on wounds may be expected to diffuse more readily than thick pus, rich in albumen; and this corresponds to the fact already noticed, that septicæmia precedes the formation of pus, and seems due to toxic substances more diffusible. A granulated condition of the pus cells may favor their penetration. Finally, according to Sachs, the protoplasma of cells has a tendency to retain the solid particles of liquids that diffuse into them, so that these grow less and less dense as they traverse successive layers of cells. With each decrease of density, or diminution of solid particles, the diffusing power is heightened, and the fluids that have once traversed the outer barrier of tissues, pass with continually increasing rapidity towards the interior of central canals or vessels. The ultimate action, therefore, would almost necessarily be exercised by the fluids.

The fluid invariably present in cases of purulent infection, and added to the ordinary traumatic fluids generating septicæmia, is pus. From the numerous experiments that have been made by the direct injection of pus into the veins, certain facts may be considered as proved. 1st. A single injection of fresh pus causes a temporary rise of temperature, but no other inconvenience. 2d. This same rise of temperature may be induced by the separate injection of either pus globules or purulent serum. 3d. The injection of purulent serum holding inert solid powders in suspension, will determine the formation of pulmonary ecchymoses and infarcti if the serum be fresh; of pulmonary abscesses if it be beginning to decompose; of septicæmic symptoms and visceral gangrene if it be entirely putrid. 4th. The repeated injection of fresh pus at intervals of two or three hours will produce metastatic abscesses according to Sédillot; but according to Billroth, who repeated these experiments, only a rise of temperature sometimes, external suppurations, and occasionally pulmonary ecchymoses. 5th. Finally, the injection of putrid pus will determine a violent septicæmia, with patches of visceral gangrene, and, in a concentrated form, is one of the most violent poisons known. .012 of the dried residue is sufficient to kill a small dog.

The entrance into the economy of pus or of some of its elements, would seem, therefore, to act in one of three ways: 1st. As a medium for the diffusion of solid particles, which would block up the capillaries of

the lungs, and thus form infarcti, according to the theory of embolism. These solid particles could not, however, be the pus globules themselves, because, in clinical conditions, these could never penetrate into the blood except in very small quantities, and a single injection of much larger quantities of fresh pus will not produce such effects. 2d. The pus may be supposed to act by a peculiar alteration of the blood, such as occurs by repeated injections at short intervals. 3d. Finally, it may act as a putrid fluid, but endowed with toxic properties of peculiar intensity.

The theory of embolism, invoked for the explanation of metastatic visceral abscesses, has, as every one knows, been successfully applied to the pathogeny of cerebral and pulmonary apoplexies; and there is no need in this place to enter upon its details. That the ecchymoses determined by the injections of fresh purulent serum and inert powders, represent the initial lesion of metastatic abscesses, is rendered probable by the frequent clinical coexistence of the two, together with that of all the intermediate stages between them. Thus, in an interesting case of acute pyæmia, laid before the New York Pathological Society by Dr. Janeway, the lungs, liver, spleen, kidneys, and, extremely rare circumstance, even the heart, are said to be studded with "minute white spots surrounded by a red areola," evidently metastatic abscesses. The first stage of such abscesses was represented in the lungs by numerous nodules of pulmonary apoplexy; the last, at the apex of the heart, by two small cavities entirely filled with pus.

But the progress of such infarcti towards suppuration, which is the characteristic fact of clinical pyæmia, and which is so difficult to reproduce in experiments, implies the addition of some other element to that of embolism; for ordinary infarcti do not suppurate, but undergo the fatty or cheesy degeneration. In pyæmia, therefore, either the embolus, or the liquids with which it is impregnated, or both, must be possessed of peculiar properties, and to them must be due the lobular inflammation of the lungs, and the suppuration in which it so rapidly terminates. This local inflammatory property may be considered identical with the general pyrogenic action that these same fluids exercise on the blood, and both depend on the accelerated metamorphosis of tissue and consequent generation of heat due to rapid chemical combinations.

Diffused suppurative inflammations are, therefore, unquestionably the proximate cause of visceral metastatic abscesses; and Ranvier, in his recent paper already alluded to, considers them sufficient explanation, without any necessity for the intervention of embolism. This distinguished microscopist declares that he never found the small vessels surrounding the abscesses to be obstructed; but on the contrary, during the ascending period of the abscess, they were always gorged with blood. These negative facts prove nothing, however, against the former existence of capillary embolies, which disappeared in the midst of the vascular afflux their mechanical and chemico-vital irritation had determined. At all events, these inflammations which M. Ranvier shows to be nodules of catarrhal pneumonia, with proliferation of epithelium, are very different from the diffused patches of congestion or gangrene determined by the injection of putrid matters, whether these be purulent or non-purulent. In the latter case the effect on the general mass of the blood overpowers the local effect on special groups of capillaries. The lesions, those of septicæmia, resemble those of typhus, while the catarrhal pneumonia of pyæmia resembles that induced by injection of solid powders into the bronchial tubes. The peculiar relations of the capillary net-work of the lungs to the circulation, net-work which must necessarily be traversed by any solid particles circulating in the blood; the coincidence in pyæmia, of such conditions as render the circulation of such particles highly probable; the almost universal localization of pyæmic abscesses in the lungs, where Billroth found them in seventy-nine out of eighty-four cases; the coexistence of all grades of lesions intermediate, with ecchymoses and infarcti, and completely formed abscesses; all these facts indicate that the first-named mode of the action of pus—that where it acts as a medium for diffusing solid irritative particles—is one of the most characteristic, and that which chiefly distinguishes it from non-purulent septic fluids.

In the second place, the fact that repeated injections of pus will produce effects that cannot be determined by a single injection, imply that the pus may act by a previous special alteration of the blood again different from that of septicæmia. According to Sédillot, the effect of repeated injections of pus is to accumulate its corpuscles in the blood, and thus block up pulmonary capillaries by a peculiar kind of embolism. But this could not be true in clinical cases, for there the pus is not injected directly into the veins, but its elements, if they penetrate into the circulation at all, are diffused gradually in too small proportions to cause mechanical obstruction.*

Billroth admits a multiplication of the white blood-corpuscles, and an increased tendency on their part to accumulate in the capillaries of the lungs, whence the metastatic abscesses. He thus explains both the excess of white corpuscles noted by Sédillot, and also the peculiarity of the action of pus, as distinguished from that of septic non-purulent fluids.

Perhaps it is not too hypothetical to connect this excess of white corpuscles with the tendency to purulent effusions in the splanchnic serous cavities and in the articulations. These do not depend upon inflammation, for that seems rather to follow than precede them; and they may be reabsorbed with a rapidity unknown in ordinary purulent arthritis.

When the pus is putrid it acts like putrid fluids, and determines not pyæmia, but a septicæmia of peculiar malignancy. The poison generated in pus, therefore, seems to be much stronger than that of other fluids.

Having passed in review the notable differences that exist between septicæmia and pyæmia in regard to their symptoms, the time and mode of their invasion, their anatomical lesions, and their reproduction by experiment, we are led to inquire whether these differences depend upon the operation of different poisons, or of the same poison operating in different conditions. The second doctrine is most emphatically affirmed by M. Verneuil in the recent discussion at the French Academy. He declares that pyæmia or purulent infection is to be regarded as an accidental complication of a general disease, septicæmia, which in a mild form, at least, exists necessarily in the case of every open wound. Septicæmia depends upon the absorption of sepsine, generated in the traumatic fluids; pyæmia occurs when this sepsine impregnates emboli that, carried to the lungs, form metastatic abscesses, of which each becomes a new focus of infection.

The term *sepsine*, invented by Bergmann and adopted by Verneuil, represents the unknown quantity existing in purulent or putrid liquids that gives them their peculiar pyrogenic properties. Great efforts have lately been made to isolate this hypothetical substance. Panum and Hemmer have shown that it exists partly in the serum of the pus, partly in the filtered globules.

* M. Demarquay has recently performed some experiments, considered to prove that such penetration *does* take place. See *Archives Générales* for December.

It is not volatile, and cannot be distilled from pus, but remains behind in the dry residue. An aqueous extract of this residue is toxic, and, moreover, will diffuse through animal membranes, and communicate its properties to pure water on the other side. This diffusibility is an eminent characteristic of the "sepsine," so called; and in virtue of it Bergmann claims to have isolated the toxic principle from many others with which it was associated, including inorganic matters, albuminous substances, and leucine.

Direct experiments with a number of substances, as various salts of ammonia, sulphide of carbon, solutions of leucine or tyrosine, either produced no effect, or symptoms quite different from those of septic or purulent infection. With sulphide of ammonium alone, Weber, who employed much stronger doses than Billroth, obtained a notable rise of temperature and a septic inflammation of the intestinal mucous membrane.

Until the toxic principle in the two cases shall have been isolated its unity cannot be considered proved. In the mean time the following facts speak in favor of the existence of two poisons analogous to each other, but not identical.

1st. That non-purulent liquids, holding solid particles in suspension, do not determine the same lesions as purulent serum, that has first been filtered of its globules and then associated with inert powders.

2d. That the train of symptoms which occur after the establishment of suppuration, are not merely different in degree, but in kind from those which have preceded it.

3d. That pus exercises an action apart from that determined by its putridity.

4th. When pus is putrid it is a more violent poison than other putrefying traumatic fluids. Clinically the presence of putrefying pus is associated with the mixed disease, septico-pyæmia, the most fatal of all surgical affections.

5th. The conditions of the diffusion of pus have been shown to be different from those of primitive septicæmia.

Independently, however, of the probability of some special toxic agent in pus, which gives a peculiar character to pyæmia, the existence of metastatic abscesses introduces new complications by multiplying the foci of infection. From each abscess new pyrogenic material is continually being thrown into the blood, and when the abscess is situated in the lungs, the material that has been formed there is probably peculiar, on account of the peculiar exposure to air to which it has been submitted.

The dependence of the characteristic march of pyæmia upon metastatic abscesses, is shown by the insidious invasion of its symptoms at this moment of their formation, and by its gradual intermittent progress in proportion to their successive evolution. Hence the initial chill *after* the subsidence of traumatic fever; hence the increasing violence of the chills as the visceral suppurations become more numerous; hence the peculiar danger of pulmonary abscesses so much greater than that of even pyæmic abscesses formed in external cellular tissue.

On the other hand, it is unquestionable that the violence of pyæmia is not invariably in proportion to the number of pulmonary abscesses; and that in certain cases where the first symptoms have coincided with external suppurations, the abscesses found in the lungs after death are evidently of recent formation. I have seen several such cases, in which, even though the final catastrophe be attributed to the pulmonary complication, yet it is unquestionable that pyæmia must have been prior to it. In these cases it is impossible to avoid belief in the direct action upon the blood of the elements of pus derived from the surface of the original wound.

The prophylaxis of septicæmia is more easily attained than that of pyæmia, because the conditions upon which septic poisoning depends are less peculiar than those of pyæmia. There is no special anatomical condition of the wound, such as exists when bony tissues are involved. The system is capable of tolerating the absorption of a certain amount of septic material, and when, from the extent of the traumatism, there is an excess of dead tissue, this may be removed by surgical interference. The great indications in the prophylaxis of septicæmia are 1st, to prevent the devitalization of new tissues; 2d, to prevent the exposure of tissues thus devitalized to the action of infusoria, or animal germs, the agents of putrefaction.

The first indication is pre-eminently fulfilled by purification of the air which the patient is compelled to breathe. This is effectual, not on account of any direct action upon the wound, but by maintaining the nutritive powers of the blood and its consequent action upon tissues whose vitality is threatened. So long as this vitality is maintained, the development of microzymes is to be little dreaded.

The second condition is only completely fulfilled when air is completely excluded from the wound, and with it, on the one hand atmospheric germs, on the other the oxygen necessary to the development of animal microzymes. Air is nearly excluded when a wound is enveloped in an atmosphere of carbolic acid, and to such exclusion must be largely attributed the favorable result of such treatment. Occlusion, either by this so-called "antiseptic" or by mechanical means, may prevent the decomposition of traumatic fluids; but when this has once set in, nothing will arrest it, not even the destruction of the germs which may have been its cause, as we have seen, these die of themselves in the putrefying fluids whose putrefaction they have determined. Hence a treatment directed to their destruction would be worse than superfluous, if it led to neglect of the great indication in the prophylaxis of this stage, removal of the traumatic fluids from beyond the reach of absorbents.

The greater facility with which this removal may be effected in the case of wounds of soft tissues explains their greater immunity from danger, and the far greater success of carbolic acid in their treatment. The septicæmia that may occur in the course of such wounds, depends upon the absorption of non-purulent decomposing fluids, and its intensity is in proportion to their mass. When the fluids already formed have been carefully washed away, the use of carbolic acid, that will not, by the ordinary methods, *prevent* decomposition, nevertheless restrain it, and hence reduce septicæmic accidents to a degree of intensity bearable by the economy. It is in these cases that the effect of good atmospheric hygiene is so apparent, by preventing the devitalization of new tissues. The most dangerous degrees of septicæmia may be averted, and its worst form, hospital gangrene, be entirely banished from hospital wards.

But pyæmia is connected with much more complicated conditions, many of which are entirely beyond the reach of carbolic acid. It depends on the presence of a fluid that, once secreted, decomposes with peculiar facility, seems to generate a poison of peculiar intensity, and expose the products of its decomposition to absorption at a moment that the power of absorption is at its maximum. It has been shown to act, not merely in virtue of such decomposition, like all putrid fluids, but by a special effect on the blood, and by a special connection with the thrombi blocking up the veins

surrounding the wound. While the poison of septicæmia is principally absorbed by the lymphatics, that of pyæmia passes almost exclusively by the veins, either those in the bones, or those newly developed in the granulations of the wound.

This poison is therefore contained in inaccessible canals, and carbolic acid has as little effect upon it as it would upon an abscess in whose cavity it had been injected and shut up to mix with its contents. A comparatively minute proportion of purulent poison is capable of inflicting all the injury possible, so that great diminution of the mass of toxic material has very much less effect on the development of pyæmia than on that of septicæmia. The control must be complete, or it is useless, and it must be exercised not merely in the general hygienic conditions to which the patient is submitted, but still more, over the local conditions peculiar to the anatomical nature of his wounds.

From this predominance of local conditions, pyæmia is, as might be expected, no exclusively hospital disease. Billroth asserts that it is as common in private practice as in hospitals, only when a death occurs that cannot be explained by hospital miasms, it is attributed to gastritis, or other accidental complication. Mr. Callender, in the fifth volume of St. Bartholomew's Hospital Reports, shows that although the mortality of city patients operated on in city hospitals was higher than that of the country, yet the mortality of country patients was the same, whether they were in large city hospitals, in small country hospitals, or even in average country practice.

It follows that absolute exclusion of air from the wound is much more important in the prophylaxis of pyæmia than of septicæmia. The partial occlusion effected by incrustation with carbolic acid, is often sufficient for wounds of soft tissues. But for wounds involving osseous tissues, the apparatus employed by M. Maisonneuve at the Hôtel-Dieu is much better adapted. Most American surgeons visiting Paris have had an opportunity of observing this method of treatment, but I do not know whether it has been introduced into this country. The moment that a limb is amputated, the stump is surrounded by a conical guttapercha cap, whose rim fits air-tight to the skin. From the apex of this cap passes an India-rubber tube that connects with an aspirating pump. By means of the pump the liquids from the wound may be drawn off, and discharged by a second tube into a receiver. During the intervals, the elastic walls of the cap and tube coming from the wound, fall together so that no air is in contact with the suppurating surface. To dress the wound, the tube is detached from the pump, and connected with the tube of a bulb-syringe, in whose continuity is inserted a short piece of glass tubing, so that the operator may watch the stream of fluid he injects upon the stump, and be sure that no bubbles of air pass over. The detersive liquids employed are either tincture of arnica or a solution of carbolic acid. These, injected in a continuous stream on the stump, are allowed to flow off by a secondary tube, connected with that of the bulb-syringe. In this way the wound is dressed daily, without the least exposure to the air. The apparatus may also be used in cases of accidental traumatism, as compound fracture; but here it may be less efficacious, when the dead tissues have already been for some time exposed to the air.

As far as my own observation extended, this apparatus yielded excellent results, and the principle upon which it is based seems certainly most rational. I am unable to tell why it is not adopted in other surgical wards than those of M. Maisonneuve.*

* I found, after writing the above, an account of Maisonneuve's apparatus in the fifth volume of the *Practitioner*.

FORCIBLE MANUAL DELIVERY IN PUERPERAL CONVULSIONS.

By JOHN M. JULIAN, M.D,

NEW YORK.

The small number of reported cases of manual version in puerperal convulsions prompts me to offer a contribution to the subject, with a view of calling the attention of the profession to an efficient means of saving the life of mother and child, which means have not received the attention which, in my opinion, they deserve. This is more particularly the case since anæsthetics have been found to be so useful in the management of the various complications of labor.

I was first led to favor forcible manual delivery by hearing of the death in convulsions of a primipara undelivered, aged 19, eight months advanced, whom I had visited incidentally. In that case I learned that the persistent administration of chloroform had no result whatsoever.

After having seen this case, I determined to try, in a similar case, the effect of forcible delivery. An opportunity for so doing soon presented itself. On the 9th of June, 1864, I was called to see Mary M., æt. 21. She was six and a half months pregnant, had been eight hours in convulsions, was uræmic, had stertorous breathing, pulse rapid and feeble, pupils insensible to light, and the os barely admitting the end of the index. With much less difficulty than I had previously anticipated, my hand was introduced into the vagina, next the index, and subsequently, one by one, all the other fingers were forced through the os; next the hand was passed in the uterus; one knee was hooked and brought down; and the delivery of a male child accomplished, in the course of about twenty minutes. The convulsions did not return after delivery; but she never rallied, and expired the next day.

Case II. Reached Mrs. S.'s bedside September 8th, 1864 (town of Guttenberg), æt. 36, primipara, who was in labor, had frightful œdema of body, was insensible, and had stertorous breathing. Had been fifteen hours in convulsions; os admitting the end of the index finger. I administered chloroform at once, and thereby controlled convulsions, so as to enable me to deliver a pair of male twins, the first, by version, being still-born; the other, by pedal extraction; alive. There was one slight convulsion three hours after delivery. Consciousness returned the next morning, the albumen disappeared at the end of the sixth day, and mother and child made a rapid recovery.

Case III. Saw Mrs. S., æt. 23, in consultation, Nov. 21, 1865; primipara, with the usual uræmic symptoms; had been fourteen and one-half hours in convulsions; insensible and stertorous since first attacked; os undilated, no apparent symptoms of labor present; digital and manual dilatation and version performed in less than thirty minutes, (with sanction of her medical attendants), in the usual way, under chloroform. One slight convulsion three hours after delivery; she remained insensible and afterwards delirious for over forty-eight hours, from which she recovered; but succumbed, one month from date of delivery, to an attack of pleuro-pneumonia. Child ever after subject to occasional epileptic convulsion, who died two years after, of cerebral disease.

Case IV. Saw, in consultation, on the first of March, 1866, at 11 A.M., Mrs M. Stage of pregnancy, eight and one-half months, primipara, urine two-thirds albuminous, countenance anæmic, fixed pain in forehead, nausea, pulse rapid and feeble. Counselled induction of labor. At 5 P.M. a convulsion occurred. At

9½ P.M., with the concurrence of her medical attendant, she being fully conscious and about the room at the time, os closed, was placed in the recumbent posture, and fully anæsthetized. I inserted my hand as before (encountering this time a little more rigidity than usual), and delivered twins—the first child by version. Both children lived. The mother made a rapid and uninterrupted recovery, the operation occupying about half an hour's time.

CASE V. Saw, on August 4, same year, a next-door neighbor to Mrs. M., Mrs. W. Stage of pregnancy said to be eight months. Had been about ten hours in convulsions; primipara, uræmic, deep stertor, pulse rapid and feeble, circulation apparently ceasing. Had been previously to my coming ineffectually anæsthetized during several hours; os undilated. I proceeded at once to deliver in the usual way, which was soon accomplished, this time without anæsthesia. The convulsions ceased after delivery, but she expired the next day.

CASE VI. Mrs. J., æt. 22, secundipara, who, during her previous pregnancy (sixteen months from date), had suffered from uræmic convulsions, ending, five or six weeks after their occurrence, by the spontaneous expulsion of a decomposed fœtus; whole growth appeared to be of about five months. I was requested to see her on the 5th of March, 1869, at 4 A.M.; said to be in her seventh month; face and lower extremities œdematous; headache, nausea, pulse about 54; had had two convulsions previous to my coming; medical attendant gone home 12½ P.M.; return of convulsions and vomiting, pulse 40; insensible, os closed, no symptom of labor. I at once proceeded to perform version under chloroform, and in the usual and above-described way, which was accomplished in about twenty minutes; child a male one, non-viable. The convulsions never returned, consciousness became gradually restored, and she made a rapid recovery. On the 6th of June, 1871, she was again spontaneously delivered at eight months of another male child, but this time without convulsions; child died on the twelfth day, of epileptic convulsions; albumen was again detected in Mrs. J.'s urine.

In conclusion, I will state that my object in publishing the above has been to induce others to give the result of their experience in this matter, and help to establish, by a sufficient number of precedents, the propriety or impropriety of the operation. Inasmuch as a great number of obstetrical authorities look upon the measure as a most desirable one if it can be accomplished without injury or detriment to the patient, I think that on this point the general result of my cases ought to have a tendency to dispose of this objection, and demonstrate that the operation can *à priori* be performed with tolerable safety and celerity. They also suggest the belief that, under full anæsthesia, the question of non-dilatability of the os has not been as yet properly or sufficiently looked into; and that, at least in special cases, this operation ought to take precedence over the safer but more tardy rule of induction.

Therefore, I feel most sanguine in the belief, that should this mode of procedure be more generally followed, in like emergency, the mortality tables of puerperal convulsions would become notably improved, and the lives of fewer women and children sacrificed.

In corroboration of the preceding remarks, I beg to observe that, in a very extensive search made into the literature of the subject on manual dilatation in puerperal eclampsia, I have found but five cases, which, however, fully substantiate my views: one of these will be found by Noeggerath and Jacobi, another by Dr. Paget, one by Dr. J. H. Ross, and two by Dr. Holland, copied from the *Lancet*, and found in Braithwaite's Retrospect, Vol. lxiv., the results of all of which were successful, and one equally successful in Milne.

I will further observe that the large sanguineous depletion deemed indispensable, and so firmly relied on, is falling into disfavor. In the Guy's Hospital Reports for 1871 will be found a series of cases, by Dr. Philips, in which bleeding was not resorted to, and chloroform mainly relied upon for the control of convulsions; a practice which has likewise been followed, in the latter part of his life, by our late distinguished fellow-townsman, Prof. Geo. T. Elliot.

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Progress of Medical Science.

THE BLOOD IN SYPHILIS.—Dr. Lostofer's alleged discovery of bodies peculiar to syphilitic blood, has led to considerable discussion in Vienna, the most prominent of his opponents being Dr. Wedl, who claims that they are only oily particles obtained from the sebaceous follicles in the operation of puncturing the skin. The bodies under question are described as having a diameter ranging from $\frac{1}{3000}$ to $\frac{1}{12500}$ of an inch, their contour being sharply defined, and light being strongly refracted by them. They are said to have a greenish-blue tinge. With regard to the vacuoles with which these corpuscles are said to become surrounded, Dr. Wedl believed them to be the result of a destructive process, being induced by the development of water and of carbonate of ammonia during decomposition of the blood, the same phenomenon being observable when an emulsion of human fat is heated with a solution of potash. The reason why Dr. Lostofer had seen these corpuscles only in blood after four or five days, and not in fresh blood, was that they were covered by the blood corpuscles.

Professor Stricker said he had placed a hundred specimens before Dr. Lostofer who had diagnosticated correctly those taken from syphilitic patients, with the exception of twenty doubtful cases. He did not venture to assert that they were either germs or fungi.

Dr. Neumann said that nearly four years ago Hallier described the structures found in the blood in infectious diseases, including syphilis; he said these gave rise to syphilis, and their most minute elements penetrated the blood corpuscles and rendered them diseased. These corpuscles multiplied by division, assuming the characters of *coniothecium*. Hallier had found them in syphilitic paronychia, condylomata, and in other manifestations of syphilis. Oklotsch had also found traces of them in the skin as well as in the blood. The result of experiments which he had made with specimens of blood from persons presenting various forms of syphilis was, that *bacteria* were developed in the blood-corpuscles of the infected blood which differed in no respects from those developed under similar circumstances in the blood from other contagious diseases; even after so long a period as five months these organisms multiplied in their own forms, and, in spite of the addition of the various organic and inorganic substances, no fungi were found. Since Dr. Lostofer had announced his discovery, he (Dr. Neumann) had made fresh investigations, and had found that the corpuscles might be developed in various numbers and sizes in different kinds of blood. He had found them in the blood of small-pox, eczema, etc.; and therefore they could not be regarded as a specific indication of syphilis.

The discussion terminated with the appointment of a committee to investigate the subject, consisting of Drs. Rokitansky, Brücke, Billroth, Reichert, Karsten, Klob, Bausch, and Auspitz. Dr. Kraus, editor of the *Alg. Wiener Med. Zeit.*, is of the opinion that Dr. Stricker, Hebra, and others have been deceived, and have acted most unwisely in forming their opinions so rapidly. Skoda seems also to have been very precipitate.

Protracted Gestation with Puerperal Convulsions.—E. P. Bernardy, Philadelphia (*Phila. Med. Times*), relates a case of protracted gestation, in a primipara, in which the child was carried, he believes, three hundred and forty-four days. During thirty-three convulsions, extending over a space of eight hours, eleven scruples (220 grains) were given, which only seemed to quiet her. There was no deep sleep, the patient being easily wakened. This is interesting as showing how much hydrate of chloral can be given in convulsions without any bad effect.

The child was enormous, weighing fifteen pounds, and, when dressed, appeared as if it were three months old instead of a few hours. The proportions of the head were as follows: circumference, 15 inches; occipito-mental diameter, 8 inches; fronto-mental, 4½ inches; occipito-frontal, 6¾ inches; length of the body, 26½ inches; weight of the body, 15 lbs.

Uterine Anomaly.—Dr. Hening, at a late session of the Leipsic Obstetrical Society (*Journ. Gynæcological Soc.*), reported in brief a case of uterine anomaly in a girl fourteen years old, in which, instead of the uterus, there was a shallow pocket two centimetres deep.

Microscopical Examination of the Sputum.—Dr. A. P. Dutcher, Cleveland, Ohio (*Cinn. Med. News*), adds his testimony as to the value of a microscopical examination of the sputum as a means of diagnosis in chest diseases. Dr. Hughes Bennett concurs with Dr. T. Thompson in recommending it as a very useful means of diagnosis in all doubtful cases of phthisis. Dr. Andrew Clark, of London, regards the examination of the sputum as the only certain means of detecting the disintegration of the lungs and the increase of the disease.

Chronic Cystitis in the Female, and Treatment.—In an interesting paper on this subject by Thomas Addis Emmet, M.D., Surg. to N. Y. State Woman's Hospital (*Am. Practitioner*), describing a mode of treatment original with him, with cases, allusion is made to the paper on "Urethrocele, Catarrh, and Ulceration of the Bladder in Females," which was published in the *N. Y. Journal of Obstetrics*, Feb., 1871. Dr. Bozeman is quoted as stating that the operation for the relief of cystitis by an artificial opening was performed by him January, 1861, and that "to Prof. Willard Parker is due the suggestion of opening the male bladder for the relief of catarrh, and this encouraged me to extend the practice to the female bladder," and that "Dr. Emmet and other American surgeons have *since* adopted the practice in case of vesical catarrh in the female, and I doubt not with equal success," and that the "delay in the report of my case of ulceration was due to the suspension of all medical journals in the South during the war."

Dr. Emmet says that this statement is unfortunately calculated to give the impression that the American surgeons who have practised this mode of treatment since 1861 were indebted to Dr. Bozeman. This is erroneous, as until his paper was read at the meeting of the New York State Medical Society, Feb. 7th, 1871, he (Dr. B.) had not given the profession an opportunity of knowing that he had ever operated.

Dr. Emmet's claims to priority extend back to the year 1858, when, by the advice of Dr. Sims, after the removal of a calculus from the bladder by an artificial opening made in the vesico-vaginal septum, the aperture was left open for restoring the organ to a healthy state. In 1861, for the relief of a case of chronic cystitis, an artificial vesico-vaginal fistula was made by him, with the view of giving rest to the organ by the free escape of urine.

The history of a case, upon which he had just operated by making an incision transverse to the axis of the vagina, was read at a meeting of the N. Y. Obstetrical Society in Dec., 1870. Prof. James P. White, of Buffalo, an invited guest on that evening, reminded the author that he assisted at the operation in 1861, and, by a curious coincidence, was present at the final closure.

Detection of Hydrochloric Acid in Cases of Suspected Poisoning.—J. Bouis (*Journ. of Applied Chemistry*) filters the liquid through linen and paper previously moistened with acetic acid, and introduces a few crystals of chlorate of potash and some gold foil. The whole is then heated over a water-bath an hour or more, and the presence of the free acid determined from the quantity of gold that goes into solution. Chloride of tin at once betrays the faintest trace of any gold that may have been dissolved. If the liquids to be tested are very dilute it is advisable to concentrate by evaporation. The author was able to detect in this way the presence of a few centigrammes of hydrochloric acid in a large quantity of liquid. He made comparative examinations to prove that chlorides of sodium, potassium and the like did not produce similar reactions.

Antidote to Carbolic Acid.—A strong solution of saccharate of lime, it is asserted, is a reliable antidote against the poison of the carbolic acid when by accident taken internally.

A New Method of Plugging the Posterior Nares.—Henry Manfred, M.D., Cincinnati, Ohio, late Surgeon 22d Ky. Infantry (*Cin. Lancet and Observer*), after trying all the ordinary remedies for epistaxis (the hospital being without a plugging instrument), in the case of a soldier who had suffered for four days and nights without cessation, a pair of leather laces were successfully used in the emergency. The leather thong was carefully pushed along the floor of the right anterior nares until the end protruded through the posterior opening, trailing upon the epiglottis and producing cough; this loose end was secured by the forceps and drawn out through the mouth, and after attaching thereto pledgets of lint saturated with astringents, it was drawn back again until the right posterior nares was effectually plugged, and tied in front. The same process was repeated with the left posterior nares, and in half an hour the hemorrhage was stopped. He fully succeeded in plugging the right and left posterior nares, by such a simple though effective agent. From its simplicity, effectiveness, and practicability, it is to be recommended to those who may be similarly situated.

The Eye in Bright's Disease.—With regard to the frequency of changes in the eye in Bright's disease, Dr. Wadsworth, of Boston (*Boston Med. and Surg. Journal*), stated that he had for some time past examined every case that had been admitted into the City Hospital, and had found that in about 25 per cent. trouble in the eye existed. Dr. Fifield said that the strange part of these cases was the great and sudden variation in the state of vision. In some cases vision would be very much affected for a few days, and then would become almost normal.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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MEDICAL COLLEGE COMMENCEMENTS.

The College Commencements are now over, and medical educational circles have a temporary rest. The students have received their diplomas, the addresses by professors and valedictorians have all been duly delivered, the various orchestras have done their part, and now the medical sensation-hunters are left to their sober reflections. When we compare the present graduation exercises with what they were twenty years ago, we are forced to acknowledge that great changes have been made in the manner of conducting them. When we were fortunate enough to receive our medical diploma from the faculty of one of the three medical schools of this city, we were treated to the usual long and heavy address from one of the professors, and the only element in the whole proceeding which made it more than one of the dryest and most tedious lectures of the term was the exhilarating presence of a few of our female friends, who from motives of mere pity consented to worry through the hour, and assure us afterwards, in a purely feminine sense however, that they were gratified. Every graduate enjoyed these occasions because it was to be the last straw that could in the way of a lecture be placed upon the back of his memory. No one looked for anything more, save perhaps the questionable propriety of promenading his friends through the college museum to guess at the character of half of the specimens so conspicuously covered. It was considered "derogatory to the dignity of the profession" to court anything in the shape of the ordinary means of amusement on such occasions, and a band of music was thought to be as much out of place as it would have been in an old-timed Puritan prayer-meeting. But we have lived to see all this changed, and we can say, that so far as the introduction of good music and the other accessories of an enjoyable entertainment are concerned, the innovation has been a very commendable one. There are, however, changes to be made for the better in the accessories, and by these we refer to the addresses. Occasionally we are treated to first-class efforts in that direction, but in the main, when left to the faculty, they are to the last degree commonplace and tedious: commonplace, if the aim is to interest a promiscuous audience; and tedious, if treating upon a purely scientific subject. Every one who takes the trouble to go to a College Commencement is willing to admit that medicine is a noble profession, in fact the noblest of all professions, that the graduating class have shown a remarkable proficiency in their studies to gain a diploma from a faculty so jealous of the interests of medical education, and that, all told, the said college must be the best in the country. Every one is willing to admit, for the sake of the argument, that it is up-hill work to succeed in the practice of medicine—that even those brilliant young men who with demure looks and bowed heads are receiving the professorial blessing are not exempt from the application of the saying that "there is no royal road to knowledge;" all this is a very old story, and if it is to be told, after the stereotyped fashion, with the worn-out anecdotes from Smiles' *Self-Help*, and Jeaffreson's *Book about Doctors*, becomes almost unbearable. Now, why can we not keep up the new fashion of inviting some practised and entertaining speaker to interest our commencement audiences? This has been tried with good effect on more than one occasion, and we see no reason why this practice cannot be kept up.

The addresses of the valedictorians are well enough in their way. They give a variety to the entertainment, and, in return, the audience is generally good-natured enough to submit to the habitual sophomorical display of oratory. The only improvement that could be suggested in these addresses, would be to have them as brief as would be consistent with the gratification of the speaker.

But there is one aspect of this subject which in this connection deserves a passing reference. The changes that have been wrought in our college exercises have had the effect, at least, of drawing large audiences, as large perhaps as usually attend the literary schools on such occasions. This has an unquestionably good influence upon the general public in impressing them with the fact that there is an enthusiasm in the cause of medical education, and that our medical institutions are progressive and prospering. Each institution has the opportunity of maintaining a generous rivalry in this respect, and if limited by the rules of ordinary propriety, we have reason to expect that the jealously-guarded dignity of the profession will not suffer. But that there is danger of carrying the competition a little too far is painfully manifest in more than the mere commencement exercises. The colleges, stimulated by their respective successes, are promising to become the centres of uncompromising cliques. Already with some fanatical in-

dividuals the feeling of competition is fostered to that extent that hardly the actual courtesies are allowed between the parties of the different schools. In the interests of the general profession of this city we are sorry to entertain the suspicion of impending discords. We rejoice in the prosperity of the schools at large; we should be glad to see the spirit of legitimate emulation carried to the extent of raising the standard of requirements still more, but beyond this we do not expect to go. We claim that each school has the privilege of rejoicing over its successes, but neither must allow its ambition to get the better of its judgment. Not committed to the interests of any school, and alone concerned in their collective prosperity, we maintain that the rivalry should be just, honest, and courteous. That it is not so, and that there is on that account great danger of fostering cliquism, we shall on some future occasion take the opportunity of proving.

American Medical Association.

We learn that great efforts are being made by the physicians of Philadelphia to receive the American Medical Association with dignity and to entertain them courteously. As soon as the entire programme shall have been decided upon, we will be furnished with the details of the arrangements, and can then announce to our readers the character of the scientific and social entertainments which will be tendered to them. We understand that New York will be ably represented in the programme.

Reviews and Notices of Books.

A Treatise on Human Physiology, Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M.D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, etc., etc. Fifth edition. Philadelphia: Henry C. Lea, 1871. pp. 728.

This well-known book comes to us again with an increase in size of twenty-three pages over the edition of 1867, which does not, however, represent quite all of the new matter, as some of the contents of former editions has been left out. The most important changes have been made in the chapters on the formation of sugar in the liver, coagulation of the blood, the arterial circulation, the excretion of urea, and terminations of the nerves. The most valuable of the several woodcuts introduced for the first time into this edition are in this latter section.

The author states that, recognizing the recent activity in the advance of all the natural sciences, he has carefully revised the entire work. We have looked through its pages to see how far this prefatory announcement is justified by the changes and additions made, and whether "the book in its present form" is, as he has aimed to render it, "a faithful exponent of the actual condition of physiological science."

In the section on proximate principles, the introduction of Fehling's test for sugar was a needed addition.

In his estimate of the amounts of fibrin and albumen contained in the blood, the author is not consistent. Under the head of proximate principles in general, he says, "It is to be kept constantly in view, in the examination of an animal tissue or fluid, that the object of the operation is simply *the separation of its ingredients from each other*, and not their decomposition or ultimate analysis. . . Thus, the fibrin of the blood can be separated only by allowing it to coagulate; and once coagulated, it is permanently altered, and can no longer present its original characters of fluidity, etc., as it existed beforehand in the blood. In such instances as this, we can only make allowance for an unavoidable difficulty, and be careful that the substance suffers no further alteration." Yet in his estimates he follows the "dry process," and gives the amount of fibrin as 2 or 3 parts per thousand, and that of albumen as about 75 parts per thousand. The process, of which he makes no mention, in which they are separated simply by coagulation, gives about three times as much fibrin, and more than four times as much albumen.

No essential changes have been made in the section devoted to the subject of digestion, and we take the liberty of asking attention to one or two points. With regard to the action of saliva in converting starch into dextrin and glucose, the author continues to maintain the views advocated in the early editions of his work, although the fallacy of the experiments upon which some of his statements were based was pointed out several years since. The action of saliva upon the food is, he says, simply mechanical; and although, in experiments made with human saliva upon boiled starch, the mixture has sometimes shown the presence of glucose at the end of half a minute, yet this property of the saliva is, he thinks, rather an incidental than an essential one, the food remaining for too brief a period in the mouth for the transformation to take place in any great degree, and the process being at once arrested by the action of the gastric juice on the arrival of the food in the stomach. Two important facts are lost sight of in the experiments cited in support of these views: first, in carnivora (dogs having been the animals operated on) the saliva has but a very feeble action on starchy food; second, some of the principles contained in the gastric juice have the property of interfering with tests for glucose. Experiments reported by Longet eleven years ago seem to prove pretty conclusively the power of saliva to produce this change, in the human subject, during stomach digestion.

Dr. Dalton differs from most modern writers in his description of the tubular glands of the stomach, and also in his opinion that all the gastric tubules in the various parts of the stomach combine to produce the digestive fluid. We think there are few physiologists who do not consider that the fluid which is most active in stomach digestion is secreted by tubules containing glandular or spheroidal epithelium, situated most numerously towards the cardiac extremity of the organ; the tubules met with in greatest frequency at the pyloric extremity being lined with columnar epithelium and secreting mucus chiefly.

There is a subject of some interest connected with the function of digestion which we would have been pleased to see at least mentioned, viz., the ability of the large intestine to digest and absorb sufficient nourishment, in some instances, to maintain life.

We are not a little surprised at the views expressed with regard to the course taken by the oleaginous principles of the food in reaching the circulation. "The absorption of the digested fluids is accomplished mainly by the blood-vessels. . . . The fatty matters of the food," he says, after speaking of albuminoids, etc., "are also taken up by the blood-vessels and pass in

this way into the circulation. . . . The oleaginous materials, thus prepared, are absorbed by the blood-vessels of the intestine. . . . The oily matter then passes onwards, penetrating deeper and deeper into the substance of the villus, until it is at last received by the capillary vessels in its interior." The only reference made in this connection to the function of the lymphatics is this, something over two pages having been devoted to explaining the *modus operandi* of the passage of fat into the portal system: "The absorption of fatty matter is also accomplished by another set of capillary vessels of the intestine, namely, the 'lacteals.'" We are at a loss to know on what grounds Professor Dalton attributes the function of absorbing the greater part of the chyle to the blood-vessels. We are aware that in birds this is the case; but in the human subject, we had thought it pretty definitely settled by post-mortem appearances, by the effects of disease of the mesenteric glands in producing emaciation from obstruction, of the passage of chyle, and by experiments upon animals approaching nearest to man in the arrangement of the digestive apparatus—that, although some of the fatty matters may be absorbed by the blood-vessels, yet, far the greatest amount enters the circulation through the lymphatic system. We question very much if the author has, in this regard, made his book "a faithful exponent of the actual condition of physiological science."

Speaking of the modes of origin of the lymphatics he says they "are to be found everywhere in the integuments of the head, the parietes of the trunk, the upper and lower extremities, and in the muscular tissues and mucous membranes throughout the body," omitting two of the most important tissues, viz., the connective tissues and the serous membranes, and therefore any mention of their frequent origin in lacunar spaces between organs. Indeed, by many histologists it is now considered as settled that the serous sacs are integral parts of the lymphatic system.

In speaking of the function of the bile, the author, although at the outset his words would lead the student to infer that this fluid contains excrementitious as well as recrementitious principles, makes no mention of the excrementitious principles. After giving some of the reasons why we *might* suppose the fluid to be excrementitious, he proceeds to show that the death of an animal in which a biliary fistula has been successfully established is owing to the fact that the principles of the bile are not brought in contact with the secretions of the intestinal canal, and with the intestinal walls; and he goes on to state that the bile "is a secretion which has not yet accomplished its function when it is discharged from the liver and poured into the intestine," and that all of the biliary ingredients are absorbed, and are not to be discovered in the fæces. Not a word is said of cholesterin, and the student will probably end the chapter with the idea that his first impression, that the liver had an excretory function, was a mistake.

A considerable addition has been made to the chapter on the formation of sugar in the liver, bringing it quite up to our present knowledge of this function. And here we must compliment the professor's well-known powers of description, for, with the aid of two wood-cuts and a few lines of text, we have not the least difficulty in recognizing his "*comminuting machine*" as the article so familiar to most eyes as a "fluting machine." To those who have, for the last five years, been familiar with the researches of Chrzonszczewsky and others on the origin of the bile ducts, as verified by Dr. Stiles of Brooklyn, (*Third Annual Report of the Metropolitan Board of Health*, 1868, p. 256–57) the coolness of the following quotation, from page 245, will be refreshing: "The exact mode in which these cells are connected with the hepatic duct was for a long time the most obscure point in the minute anatomy of the liver. It has now been ascertained, however, by the researches of Dr. Leidy, of Philadelphia, and Dr. Beale, of London, that they are really contained in the interior of secreting tubules, which pass off from the smaller hepatic ducts, and penetrate everywhere the substance of the lobules. The cells fill nearly or completely the whole cavity of the tubules, and the tubules themselves lie in close proximity with each other, so as to leave no space between them except that which is occupied by the capillary blood-vessels of the lobular plexus."

The student, searching for information as to what is meant by the amœboid movements of the white blood corpuscle, will fail to obtain, from the volume under consideration, any intimation that this body is anything else than "globular in form" under all its normal conditions. It is also *apropos* to remark that the existence of this same white corpuscle outside the walls of the blood-vessels is not even hinted at in the shape of allusions to the existence of lymph, salivary, or mucous corpuscles. In writing of the milk, colostrum corpuscles are mentioned, but nothing is said of the fact that they are identical with the so-called white corpuscle. No mention is made of the leucocyte in the article on the spleen, the minute anatomy of which consumes two pages, and the effects of its removal from the lower animals another. Not a word is said anywhere about the minute anatomy of the kidneys or the effects upon animals or man of their removal, by operation or disease, save in an allusion to the effects of suppression of all of the excretions. On page 355 he says, "The kidneys, on the contrary, do not secrete anything, properly speaking, and are not, therefore, glands." What they *are*, he does not inform us.

In the preface, the author says: "And accordingly the discussion of doubtful and theoretical questions has been avoided, as a general rule, in the present volume, while new facts, from whatever source, if fully established, have been added and incorporated with the results of previous investigations." It would have been interesting to students of physiology throughout the scientific world, if Professor Dalton had made an exception to his general rule, and told them how he came by the decision of a question, which has for years been one of the most difficult problems they have had to solve, viz., the cause of the coagulation of fibrin, or on the other hand the cause of its remaining fluid. Robin and Verdeil abandoned the subject, with the assertion that it is "as vain to seek after the cause of this fact as to inquire why fibrin exists, why sulphate of copper is blue," etc. Professor D. has at length solved the problem. "The answer to this question," he says, "is as follows:—The fibrin remains fluid during the natural state of the circulation, because, like the other ingredients of the blood, it is constantly undergoing changes which prevent its arriving at the state necessary for coagulation." What the "states" are, to which the other ingredients of the blood must arrive, in order that *they* may coagulate, we all know of course—the chloride of sodium for example. "We can easily understand how this should be the case," he continues, "when we remember, in the first place, the extreme rapidity with which the blood moves in the vessels of the living body. . . . Secondly, the fibrin of the blood *disappears while passing through the liver and the kidneys.* . . . . By calculating approximatively the quantity of blood contained in the whole body and that passing daily through the liver and kidneys, it is easy to estimate that a quantity of fibrin equal to that in the entire blood is destroyed and re-

produced several times over in the course of a single day. Thus the fibrin existing in the blood at any one time, is that which has been recently formed; and before the time arrives at which it would naturally coagulate, while still in the vessels, it has already been decomposed by its usual metamorphosis in the circulation, and has been replaced by a new supply of still more recent formation." Now not all of the fibrin in the body is contained in the blood-vessels, but a very considerable proportion is to be found in the lymph, which moves in the large vessels at a speed no greater than an inch in a second, and very much more slowly the nearer we approach the periphery. Again, the fluids which we find in the serous and synovial cavities are known to contain, sometimes, fibrin in considerable amount; and these fluids, under certain circumstances, undergo little or no movement, so far as can be demonstrated; surely they are not passed through the liver and kidneys at short intervals in order to undergo their "constitutional." How, then, is the fact that they do not coagulate while yet in the body to be accounted for?

We now come to the function of respiration, and first arises the query how much influence is likely to be exerted on the diffusion of air in the bronchia by the movements of so much of the cilia, (whose whole length is but $\frac{1}{100}$m to $\frac{1}{250}$ of an inch) as projects beyond the layer of mucus which covers the walls of these canals.

The statement that the oxygen of the blood is present in solution in the blood globules, instead of in combination with some of their elements, can hardly be said to agree with the results of experiments by Bernard and others since 1859; nearly, if not quite, all of the writers since that period agreeing that it is in the latter condition. The quotation from Magnus, "that the blood holds in solution 2½ times as much oxygen as pure water could dissolve at the same temperature," is all very well as far as it goes, since this is about the amount held *in solution* by the plasma; but as for the whole quantity of oxygen the blood is capable of containing, this statement gives only about one-fourth the amount now accepted.

No mention whatever is made of the researches of Dr. Hutchinson, of England, with reference to the amount of air respired by an individual being a test of his his vital capacity—observations which are of daily use the examiner for life insurance.

We simply note in conclusion, for we have already, we fear, transcended the bounds of the reader's forbearance by the length of our remarks, that the capillaries are spoken of as "simple, homogeneous, nucleated, tubular membranes." It occurs to us, that a nucleated membrane can hardly be called homogeneous; and we call to mind the photographs and engravings of the epithelial cells forming these tubes, which, since Cohnheim's experiments on the wanderings of the leucocytes, have become familiar to most of us.

Remarking, further, that none of the researches of late years have been added to the chapter on special senses, we bring our hasty and incomplete review to a close.

That we cannot give our indorsement to "the book, in its present form," as "a faithful exponent of the actual condition of physiological science," is, we suspect, pretty evident. We say this with regret, for, if we except English works, there is not in this country, at the present day, a complete treatise on Human Physiology available to the student and practitioner of medicine, not encumbered by a great deal of matter in which neither of these classes is particularly interested. It is our belief, that it is only this fact, and the protective tariff on foreign books, which have permitted the publication of this fifth and stereotyped edition.

DIAGRAMS OF THE NERVES OF THE HUMAN BODY, exhibiting their origin, divisions and connections, with their distribution to the various regions of the cutaneous surface, and to all the muscles. By WILLIAM HENRY FLOWER, F.R.C.S., Assistant Surgeon to, and Demonstrator of Anatomy at, the Middlesex Hospital. Edited, with additions, by WILLAM W. KEEN, M.D., Lecturer on Anatomy and Operative Surgery in the Philadelphia School of Anatomy, etc., etc. Philadelphia: Turner Hamilton. 1872. 4to, pp. 11, with 6 full-page lithographic plates in two colors. Price, $1.50.

We are glad to see these standard diagrams placed within reach of American students and practitioners, in a form more convenient for use than the English (folio) edition, and at less than one-fourth its expense. For presenting clearly to the eye the salient points of what is unquestionably to the average student the most difficult, and so the most neglected, part of descriptive anatomy, they leave almost nothing to be desired. Where improvement on the original seemed possible, it has been made by Dr. Keen with the same clear, practical judgment which we had to thank, a year or two since, for the remodelling of Heath's Anatomy. That book, with his additions and modifications, a teacher of our acquaintance, who has given it two winters' trial in the dissecting room, pronounces the best working dissector in the English language.

A TEXT-BOOK OF PATHOLOGICAL HISTOLOGY; an introduction to the study of pathological anatomy. By Dr. EDWARD RINDFLEISCH, O.Ö., Professor of Pathological Anatomy in Bonn. Translated from the second German edition, with permission of the author, by WILLIAM C. KLOMAN, M.D., assisted by F. I. MILES, M.D., Professor of Anatomy, University of Maryland. Philadelphia: Lindsay & Blakiston. 1872.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., London, Lecturer upon Pathological and Morbid Anatomy at Charing Cross Hospital Medical School. Philadelphia: Henry C. Lea. 1871.

It may, we think, be asserted with truth that in no department of practical medicine has such material progress been made of late years as in that of pathological anatomy. This progress has been so thorough that it has rendered the works published upon the subject ten or fifteen years ago almost valueless, or, at any rate, has rendered large portions of them utterly valueless, and has caused a more or less complete modification of the balance. It would seem that to Germany belongs the credit of thoroughly and laboriously studying pathology, and of bringing it to its present standard, and that the German mind, which works slowly and carefully, avoids theories and aims for truth, is specially adapted to the task of studying pathology, which can only be mastered by patient and long-continued observation. Previous to the publication of the volumes the title of which head this article, pathological anatomy was in a very complex and unsatisfactory state in this country, and the same may be said of the state of our knowledge of normal histology. As text-books upon pathological anatomy we made use chiefly of those of Vogel, Cragie, Jones, Sieveking, Wedl, and Wilks, all of which were entirely too antiquated. With these exceptions, and perhaps some portions of works upon the practice of medicine, treating upon the subject, and the occasional translation or resumé of an article on pathological anatomy in the journals, we were wholly destitute of a work embracing the whole subject, and in this connection we may add, that although Virchow's work on Cellular Pathology treated of the subject, yet as it was devoted to a theory and did not embrace the whole

subject, it failed of the purpose of a text-book. The great cause of this want of a text-book upon pathological anatomy, we think, lies in the fact that as this subject is not systematically taught in our schools, the interest which it should exercise was wanting, and hence the profession paid only slight attention to it. This absence, in our curriculum of medical study, of thorough means to convey instruction in pathological anatomy, is one of our most serious drawbacks. In days gone by the absence of such instruction was unavoidable, as there was in reality no one sufficiently accomplished in the branch to constitute instructors in it; but now, owing to the enormous facilities offered in German universities, many of our countrymen are fully able, as evidenced by the publication of their own observations, to teach students of medicine this very essential branch thoroughly. It is true that many of the details of pathological anatomy are taught *en courant* in the courses on surgery and on the practice of medicine; but pathological anatomy is a subject which certainly cannot be imparted by *viva voce* teaching, and can only be thoroughly mastered in the laboratory under competent instructors. Of late years the numerous able and important monographs upon pathological anatomy which have been published in the German medical journals, particularly Virchow's *Archiv*, have greatly interested the thinking portion of the profession on this side of the water, and there has existed a real desire for a full treatise upon this subject. In looking through the massive treatise of Rindfleisch, a variety of thoughts suggest themselves, while we are amazed at the immense wealth of knowledge stored up in it. We painfully appreciate the fact that, owing to their deficient education, how few practitioners are there who will be able to really master its contents; whereas, if they had been carefully instructed in this branch in their rudimentary education, what an amount of knowledge they could attain. The appearance of this book, with its diversity of subjects, its minuteness of inquiry, and the light which it throws upon such a multitude of pathological processes as are treated of in it, shows us really how little we know, and how as yet the majority of physicians are not sufficiently educated up to it. We really hope that ere long pathological and normal histology will be thoroughly taught in all of our colleges, and then the value of a treatise like this of Rindfleisch will be increased fourfold.

Rindfleisch divides his work into two parts; a general part and a special part. The general part contains a lengthy description of the decomposition and degeneration of tissues, including necrosis and involution, and the various forms of infiltration. This chapter covers a wide range, and treats fully of amyloid infiltration, calcification, pigmentation, and fatty infiltration. The second chapter of the general part treats of that important part of pathological histology, namely, the pathological new formations. Following a very succinct review of the various cell-theories entertained by prominent German authors, we find a very instructive consideration of normal growth as a type of pathological development. This very naturally leads to a general consideration of inflammation, which also includes a study into the nature of specific inflammations. After this follows a short but admirable description of the morbid processes taking place in the development of the various tumors, which is amply illustrated by drawings of sections of the various growths.

In his second part Rindfleisch speaks of the lesions of each apparatus and organ separately under the generic title of anomalies of them. Thus we have—anomalies of the blood and the places of its formations, especially of the spleen and lymph glands; anomalies of the circulatory apparatus, of the serous membrane of the skin; of mucous membranes, of the lungs, of the liver; of the kidneys; of the ovaries; of the testicles; of the mamma; of the prostate; of the salivary glands; of the thyroid glands; of the supra-renal capsule; of the osseous system; of the nervous system; of the muscular system; and finally the volume concludes with a copious index and bibliography. To analyze such a work thoroughly would require much more space than is at our command, and we shall confine ourselves to briefly pointing out some portions of the work which we think are of more than ordinary interest. Thus the chapter upon the anomalies of the blood includes a full review of the interesting subjects of the dyscrasiæ, chlorosis, leukæmia, and melanæmia, and also a full description of thrombosis, which is particularly interesting in a clinical point of view and is ably written. The anomalies of the skin are fully noticed, and in that chapter persons interested in dermatology can find much profitable information. The forms of catarrhal and croupal inflammation are clearly described in the section upon anomalies of the mucous membranes. We know of no work or monograph to which our readers can refer where they will find all the recent views upon the various forms of lesion of the lungs as they will in Rindfleisch's article upon that subject. We can say the same of the chapter upon the anomalies of the liver, and must call particular attention to the admirable chapter upon the anomalies of the kidneys, a subject which has lately attracted considerable attention in this country, and which is here treated of in a masterly manner. Though all the chapters are of very great merit, we will still call particular attention to those upon the anomalies of the osseous and nervous system as being particularly interesting to physicians and surgeons. In considering such organs or apparatus, the author fully treats of it in a condition of inflammation, so that in the book we have the fullest account of that complex process to be found anywhere. The style of Rindfleisch is terse and clear, but we must greatly regret that his work has not been well translated. As we read the volumes we are struck with the peculiar construction of the sentences and general lack of smoothness of the diction. In fact it suggests to the reader the idea that its translators are not thorough German scholars, and that they frequently have to make use of the dictionary. The general appearance of the work is highly creditable to the publishers, and we are pleased to see the illustrations so well done.

Dr. Green entitles his work an Introduction to Pathology and Morbid Anatomy, and with great modesty states in the preface that he has endeavored to supply a want greatly felt, and that he wishes it to be considered as a simply elementary work. He goes over the subject in hand quite clearly, and his work is written in a very pleasant manner; but the reader is continually struck with the fact that it is too brief, and that the author does not do full justice to the important subjects treated of. If in a future edition the author amplifies his work, we think, it will be really valuable. We think he has taken the excellent French manual of Cornil and Ranvier as his model, and that he would do well if he treated of his subjects as fully as they are treated of by those authors.

Criminal Abortion.— The detention of criminal abortion and a study of fœticidal drugs are ably presented by Ely Van de Warker, M.D., of Syracuse, N. Y., in a monograph of eighty-eight pages, being a reprint from the Gynæcological Society of Boston.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 26, 1872.

Dr. Abraham Jacobi, President, in the Chair.

The following physicians, recommended by the Comitia Minora, were elected to membership: George H. Humphreys, Edward C. Woodbury, William M. Bullard, Carlos P. Tucker, Alexander F. Liautard, Charles A. T. Krog, James Mitchels, J. W. S. Arnold, Edwin D. Morgan, Jr., Robert S. Prentiss, Thomas R. Pooley, Horatio Gomez, and Gilbert H. Swezey.

The President stated that the following work had been donated to the library by its author, and he was instructed to make suitable acknowledgment: "Die Geschichte der Psychologie und der Psychiatrik in Spanien, von Dr. J. B. Ullersperger, Würzburg, 1871."

Dr. P. B. Porter, from the Committee on Intelligence, read an interesting report of recent progress in Theory and Practice of Medicine.

Dr. H. Althof, from the same committee, read a portion of a long report on the progress of Ophthalmology during the past year. The conclusion of his report, and another report expected from the committee, were postponed to the next meeting.

METEOROLOGY OF NINE MONTHS.

Dr. D. H. Goodwillie, chairman, presented the following report of the Committee on Meteorology:

May 20 *to September* 3, 1871.

Barometer: mean 29.87 inches; maximum, May 2d, 30.234 inches; minimum, June 12th, 29.438 inches.

Thermometer: mean, 71.91° Fahr.; maximum, July 10th, 90°; minimum, May 23d, 54°.

Rain fell on 35 of the above 105 days, making an average of rain on every third day. On 22 of the 35 rainy days there were thunder-storms. In July rain fell on 14 days, and on 10 of these was accompanied by thunder and lightning. Hail July 16th. June 18th, rain to the amount of 2.98 inches, and at 9.50 P. M. a slight shock of earthquake. Whole amount of rain during the 105 days, 21.35 inches.

September 3, 1871, *to February* 4, 1872.

Barometer: mean, 29.65 inches; maximum, September 12th, 30.324 inches; minimum, January 23d, 29.592 inches.

Thermometer: mean, 43.24°; maximum, September 9th 68°; minimum, January 30th and 31st, 10°.

Rain on 26 days, snow on 7. Thunder-storm September 26th. Whole amount of rain, 18.06 inches.

DISEASES OF EIGHT WEEKS.

Dr. Charles P. Russel, Chairman, read the report of the Committee on Diseases:

The Committee on Diseases have the honor to present the following report upon the prevalent diseases in this city from January 1st to February 24th of the present year—embracing a period of eight weeks:

During that time there were reported to the Bureau of Sanitary Inspection 596 cases of small-pox, 123 of measles, 613 of scarlatina, 119 of diphtheria, 17 of typhus fever, and 54 of typhoid fever.

The total registered mortality for the eight weeks amounted to 4,294, a weekly average of 537. During the corresponding period of the past year there were registered 3,996 deaths—a weekly average of 500. The highest weekly average for the corresponding period of either of the five preceding years was 509 in 1870. Thus far, therefore, the mortality of the present year has been much in excess over that of recent years.

The greatest mortality occasioned by any zymotic disease has been produced by *small-pox*, namely, 192 deaths, a weekly average of 24. It has fluctuated between 15 and 32 deaths weekly, with no apparent tendency to diminish. Its proportion of mortality, as deduced from a comparison of the number of cases reported with the number of deaths registered, has been 32 in the 100. This percentage, however, is doubtless too large, as many non-fatal cases escape the observation of the Board of Health. 47 deaths have been due to *measles*—about 6 weekly—a small number. *Scarlatina* has carried off 190 persons, somewhat more than in the corresponding period of the past year. Both of the two latter diseases seem now to be slightly on the increase. 60 deaths have been ascribed to *diphtheria*, and 118 to *croup*, about the usual number. *Whooping-cough* has continued very prevalent, its fatal cases having amounted to 165, over 20 per week. *Typhus* and *typhoid fever* have both been marked by a very small mortality, having caused but 13 and 34 deaths respectively. 30 have been occasioned by *remittent fever*, an excessive mortality for the season. 154 deaths have resulted from *diarrhœal diseases* against 145 in the corresponding period of 1871. The number of deaths from *phthisis pulmonalis* was, until quite lately, comparatively small, much below that in the early portion of last year. But, during the past week, this disease exhibited a most extraordinary fatality, its deaths reaching 122, the greatest weekly number ever registered in this city, the next largest having been 102, in the week ending March 4, 1871. The deaths from the *local respiratory affections* likewise seemed to participate in the same unfavorable influences, as they occasioned 105 deaths during the week, their weekly average having been only 85 since January 1st.

Twenty-five cases of epidemic *cerebro-spinal meningitis*, or spotted fever, have thus far been reported, of which 12 have proved fatal. These cases have occurred, almost without exception, in houses of the very worst hygienic character and surroundings, and generally in tenements particularly defective as regards drainage and sewerage. Whether such circumstances are directly concerned in the production of this peculiar disease is certainly a question of vast interest to the profession.

CLINICAL THERMOMETRY.

Dr. Lucius D. Bulkley read a long and elaborate paper upon this subject, illustrated by numerous mural diagrams and tables. The paper was based on the essay to which was awarded the Stevens Triennial Prize two years ago, and its purpose was not to present a history of clinical thermometry, or an epitome of what it had accomplished, but rather to contribute new data for the thermometrical study of disease, in a systematized record of the experience of the New York Hospital for the three years prior to August, 1869, and to state briefly the conclusions which that experience tended to establish.

The number of cases in which a record of temperature was regularly kept amounted to 337, classified as follows: typhoid fever, 93; typhus fever, 23; pneumonia, 64; erysipelas, 24; acute rheumatism, 17; remittent fever, 12; intermittent fever, 7; scarlet fever, 7; phthisis, 19; acute meningitis, 9; tonsilitis, 7; peri-

tonitis, 6; miscellaneous, 49. Besides the temperature, the pulse and respiration were always recorded, and the doctor had tabulated all the cases under each disease with reference to these three vital signs. Forty or fifty of those most interesting, either from their typical character or from some other circumstance, were given in detail, with diagrams showing the curves of the three signs. Each diagram was the record of an actual case, and faithfully exhibited every failure of observation; there were no typical curves made up from the generalization of many cases, as in Wunderlich's book.

The nature of the paper precludes any extended abstract, but we hope to see it published as a monograph. It is quite time that the wealth of experience, so long carefully hoarded in the case-books of the New York Hospital, should be brought out for the use of the profession. We here confine ourselves to the doctor's concluding summary of the chief points he considers established:

"1. The body heat is maintained in health, under all conditions, at the uniform standard of 98.4° Fahr.

"2. Any constant deviation from this constitutes disease.

"3. A return to and continuance at this standard marks the termination of the disease.

"4. A single high temperature is important.

"5. The changes of temperature in diseases follow definite and known courses.

"6. Variations from these typical ranges of temperature in disease are significant, as indicating a disturbing cause.

"7. An irregular course is more unfavorable than a uniformly high range of temperature.

"8. Different temperatures characterize different diseases, and various days of the same disease.

"9. Although a high temperature indicates a more severe attack, no heat under 109° can be considered surely fatal.

"10. The daily study of the pulse and respiration in connection with the temperature is of great assistance.

"11. When the temperature and general symptoms agree, but the pulse disagrees, the two former are to be relied on.

"12. When the pulse and general symptoms agree in indicating unfavorably, the temperature cannot be relied on, if contradictory, unless the improvement in respect to temperature is marked and persistent.

"13. When pulse and general symptoms agree in a favorable indication, a high or rising temperature should arrest attention.

"14. All other means of investigation should be used in connection with the temperature to obtain the greatest benefit from the latter.

"15. The continuous daily record of the three vital signs here represented, in the way exhibited, affords much aid in the diagnosis, prognosis, and treatment of disease, by the presentation to the eye of its history in these respects.

"16. The systematic record of these three points may assist in determining, at some future day, the vexed question whether the type of disease is changing, by preserving pictures which can be easily compared."

THE ALBANY MEETING.

Dr. E. Eliot, as one of the delegates to the recent meeting of the State Society, gave a summary of its proceedings.

The President wished to direct special attention to the following resolution adopted at that meeting, and hoped each member would do his part toward inducing every respectable practitioner in the county to join the County Society:

"*Resolved*, As the old laws, requiring every physician in good standing to become a member of his county medical society, have not been repealed, it is, and always has been, the duty of every such physician to obey the law; and as the penalty for non-compliance has been removed by law, it becomes a point of honor for every regular physician to do so. The presidents and officers of every county society in the State of New York are requested to use their best efforts to have these laws complied with."

With reference to the special meeting of February 3d, the President said that he had been obliged to call it in accordance with the by-law providing that such a call shall be made on the written request of twenty members. Twenty-four names appeared on the request; twenty-seven members attended the meeting, and of these only five were signers of the call. A meeting so attended, after full notification, could hardly be considered to have been a public necessity; and it behooved those members whose politeness would not allow them to refuse an individual their signatures, to reflect whether they had not also some duty to the Society in a matter involving expense and the convenience of a large body of physicians.

Adjourned.

Correspondence.

BATHING REDUCED TO A SCIENCE.

To The Editor of the Medical Record.

Sir:—It is always pleasant to couple reminiscences with prospects, particularly when it permits to do justice to the men of the past as well as to those who represent the nearest future. The last pamphlet of Dr. Wilson Fox offers the opportunity of doing both. In seventy-eight pages he gives several monographs illustrating cases of acute rheumatism exclusively treated by *temperature* as a *remedy*, and almost exclusively managed by *temperature* as a means of *positive diagnosis*.

Acute rheumatisms in which, after a course of variable severity, the temperature suddenly rises from 103°, 104° to 107°, 108°, 109° F., have so often proved fatal within a few hours after reaching the latter degrees, that Wunderlich regards them as pro-agonistic. The uniformity of this termination, whatever plan of treatment had previously been followed, induced Dr. W. Fox to try to treat it exclusively by low temperatures. He published last year in the *London Lancet* very interesting accounts of his first trials; and now details his success in two cases which had reached, respectively, 110° and 107.3° F.; both being primary attacks of the disease, which are more commonly fatal. Dr. W. Fox does not, however, present his treatment by temperature as a remedy exclusively adapted to rheumatism, but as *the* remedy for hyperpyrexias at large. Thereupon the question suggests itself. "What will be the next move?..." An essay on the *Treatment of Apyrexia?*... Then what becomes of the innumerable diseases of modern nosographies in a therapeutic point of view?... Evidently the subject is too broad for the columns of a periodical.

These monographs of Dr. W. Fox deserve besides to be studied as presenting the most complete specimens of diseases and recoveries in which the thermometer almost alone has done all the work of clinic and

therapeutic, and the strongest practical indication of the revolution clearly expressed in the book on *Medical Temperature* by C. A. Wunderlich and E. Seguin (page 238), "Thermometry will soon rule, not only diagnosis, but pathology and therapeutics." To consider a single fact in this prospective revolution, it is interesting to see how Dr. W. Fox advocates and systematizes the use of water—not as water or as one of the *pathies*, but as a carrier of measurable or *dosable* temperature, acting physiologically in virtue of physical laws.

To render general this application of water, Dr. W. Fox insists upon the introduction in the wards of hospitals of movable bath-tubs, in which the patient could go, or be immersed, as near as possible from his own bed. This happy suggestion recalls to mind a mode of bathing patients which ought not to have been forgotten.

"*Les bains sans baignoire*," was the title of a little pamphlet handed to me, in the summer of 1835 or '36, by a gaunt and weatherbeaten Swiss physician during my introductory visit to him in a meager lodging of the *Quartier Latin*. He was wrapped in one of those broad blue cloaks in which the Old Guard are represented falling at Waterloo. Under this historical garment he was taking his *bain sans baignoire* in a double habit of flannel and water-proof. He never took any other, enjoying them especially when going on horse-back to visit his patients, several miles away; and the three hundred and odd patients of his hospital used the same bathing apparel for many years and liked it very much: indeed, there was not a single bath-tub in the hospital of Lauzanne.

For mine host was HE of whom it has been said:—"There are two systems of surgical deligation, the one handed to us under the name of Hippocrates, the other Mayor's." He had come down to Paris to have one of his free fights upon his proposed improvements with the old fogies of the Academy of Medicine, too numerous to mention: this was Mathias Mayor's yearly recreation.

Now it seems to me that this forgotten *bain sans baignoire* would be just the thing which, with slight modifications, would render easy in hospitals, and popular among the middle classes the treatment of hyperpyrexia by *medical temperatures*, not only in public institutions, boarding-schools, naval, military, industrial, and scientific expeditions, etc., but in the homes of the many who have no bathing facilities. The apparel would consist of a light stand, like the foot-step used in a library, upon which could be set a covered reservoir of a few gallons, having inserted in one of its sides a rib of glass, showing the level of the liquid, and an ordinary thermometer to regulate the temperature of the latter. Hence, one pipe or more would let down the water into the bathing-dress.

This dress—which entirely enrobes the patient, even if need be his head and some parts of his face—is double, of thick flannel against the skin, and of vulcanized cloth outside. It is also open in the centre, like a pouch, to permit the insertion of the medical thermometer in one of the natural cavities, at various points to admit the water from the reservoir, and at the feet and other declive parts to give issue to the liquid into covered receivers below.

This bathing-dress could be made as stout or as light as desirable; it could be so adjusted as to hardly hold two quarts of water, pure or medicated; mathematically warm or cold as per thermometer; stagnant around the body or streaming along it. It could be worn for hours, or days, in bed by the paralytic and rheumatic patients, or in the room, even in the open air by those who need at the same time bathing and exercise. There are many other advantages of this bathing-dress too obvious to need mentioning.

The "apparatus for applying heat and cold to the different parts of the human body," described by Dr. Alexander Robertson, of Glasgow, in the London *Medical Times and Gazette* of January 13th, 1872, seems more ingenious than the one here proposed; but their application and object differ so entirely, that where the one would be useful the other one would be useless; but both could certainly find their place in hospitals and ambulances, or be easily supplied to private patients.

Such appears to be, *prima facie*, the advantages of the adaptation of Mayor's *bath* to the therapeutics of the positive school of medicine of which Dr. W. Fox is, with his kinsman, Long Fox, one of the most noted exponents.

It seems that it would be doing an act of justice if we were giving to this bathing apparel the name of Mathias Mayor, who was never equalled for ingenuity in the mechanical department of surgery; and yet who met with so little of reward that, if he had cared a fig for a tomb-stone, he would have caused to be written upon his, "Woe to him who comes too soon."

There may be protests against the positions respectively here assigned to Mathias Mayor and to Dr. W. Fox. Dr. Richard Neale presents his own titles in the London *Medical Times and Gazette*, Feb. 10, 1872, as having applied the water treatment under cover of plantain leaves, etc., and there may be hundreds of applicants to such claims as his; for, since Priessnitz and Fleury, the hydropathist of the late French court, back to Antonius Musa, the famed hydrotherapeute of the emperor Augustus, water was uninterruptedly used as an *empyrical remedy*. But none used it prior to these later days as a *positive remedy* giving mathematical results: this is what the school to which Dr. W. Fox belongs pretends to; and to which the bathing apparel of Mathias Mayor may prove valuable.

Respectfully Yours,

E. S.

NEW YORK, March 6, 1872.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 21, 1872, to March 4, 1872, inclusive.

WIRTZ, H. R., Surgeon.—By S. O. 3, Department of Arizona, January 15, 1872, assigned to duty at Camp Hualpai, A. T.

FRANTZ, J. H., Surgeon.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Columbia, S. C.

MACKIN, CHAS., Assistant Surgeon.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Fort Macon, N. C.

BARTHOLF, J. H., Assistant Surgeon.—By S. O. 40, Department of the South, February 24, 1872, assigned to duty at Chester, S. C.

LAUDERDALE, J. V., Assistant Surgeon.—By S. O. 46, War Department, A. G. O., February 24, 1872, granted leave of absence for thirty days, with permission to apply for sixty days' extension.

POWELL, R., Assistant Surgeon.—By S. O. 28, Department of the Gulf, February 20, 1872, assigned to duty at Jackson, Miss., relieving Assistant Surgeon A. A. Yeomans, U. S. A.

Kimball, Jas. P., Assistant Surgeon.—By S. O. 42, War Department, A. G. O., February 19, 1872, to proceed without delay to New Orleans, La., and report to the Department Commander.

Cowles, Edward, Assistant Surgeon.—By S. O. 44, War Department, A. G .O., February 21, 1872, his resignation accepted, to take effect March 1, 1872.

Edwards, L. A. Surgeon.—By S. O. 63, War Department, A. G. O., March 14, 1872, relieved from duty in Department of Texas, to proceed to Philadelphia, Pa., and thence report to the Surgeon-General.

Hammond, John F., Surgeon.—By S. O. 63, War Department, A. G. O., March 14, 1872, to report to the Commanding General, Department of Texas, for duty as Medical Director.

Wirtz, H. R., Surgeon.—By S. O. 60, War Department, A. G. O., March 11, 1872, upon arrival of Assistant Surgeon Girard, in Department of Arizona, to report to the Commanding General, Department of California, for assignment to duty.

Bache, Dallas, Surgeon.—By S. O. 57, War Department, A. G. O., March 7, 1872, relieved from duty in Department of Texas, and to report in person to the Surgeon-General.

Asch, M. J., Assistant Surgeon.—By S. O. 61, War Department, A. G. O., March 12, 1872, granted leave of absence for six months.

McElderry, H., Surgeon.—By S. O. 61, War Department, A. G. O., March 12, 1872, after accompanying the first detachment of recruits sent to the Pacific Coast from New York, to report in person to the Commanding General Department of the Columbia, for assignment to duty.

Girard, J. B., Assistant Surgeon.—By S. O. 60, War Department, A. G. O., March 11, 1872, to report to the Commanding Officer, Department of Arizona, for assignment to duty.

Kimball, James P., Assistant Surgeon.—By S. O. 33, Department of the Gulf, March 4, 1872, assigned to duty at Little Rock, Arkansas.

Moffatt, Peter, Assistant Surgeon.—By S. O., 60, War Department, A. G. O., March 11, 1872, assigned to temporary duty at Newport B'ks, Ky.

King, J. H. T., Assistant Surgeon.—By S. O. 62, War Department, A. G. O., March 11, 1872, to report to the Commanding General, Department of the Platte, for assignment to duty.

Corson, J. K., Assistant Surgeon.—By S. O. 20, Middle Division of the Mo., leave of absence extended thirty days.

Medical Items and News.

University Medical College, N. Y.—Dr. Joseph W. Howe has been appointed clinical Professor of Surgery; Dr. Henry S. Hewit, Professor of Clinical Surgery; Dr. Arnold, Professor of Pathological Anatomy; and Dr. Kammerer, Professor of Diseases of Women and Children, vice Dr. F. D. Lente, resigned.

The Pharmacy Bill has been reported favorably from the Health Committee of the Assembly. Dr. Loughran, of Kingston, the Chairman of that Committee, we are happy to say was one of the principal means to that end.

Acid Syrup of the Hypophosphite of Lime in Vomiting of Pregnancy.—Dr. A. F. Pattee, Boston, speaks very highly of the use of this syrup in the obstinate cases of vomiting in pregnancy. The dose ranges from ʒj–ʒss, given with the food, three or four times a day.

The Alumni Association College of Physicians and Surgeons held its annual meeting at the College of Physicians and Surgeons, Tuesday, Feb. 27, 1872. The meeting was called to order by the Vice-President, Dr. C. R. Agnew. After the reading of the minutes of the previous meeting by the Secretary, Dr. John Shrady, the same gentleman read the obituary record. The Prize Committee through its Chairman, Dr. Gurdon Buck, announced the award of the Alumni Prize of four hundred dollars, to Dr. Frank P. Foster. The election of officers was then held with the following result. President, Dr. C. R. Agnew, N. Y.; Vice-President, Dr. Robert A. Barry, N. Y.; Secretary, Dr. John Shrady, Harlem, N. Y.; Assistant Secretary, Dr. A. Norton Brockway, Harlem, N. Y.; Treasurer, Dr. J. L. Banks, N. Y.

The President. Dr. E. M. Hunt, of Metuchin, N. J., gave a scholarly address upon the past and present in medicine which was full of wholesome reflections and suggestive thoughts. The address was ordered to be printed.

A discussion then arose bearing upon the expediency of increasing the usefulness of the Association by making the reunions partake more of a sociable character. The sentiment of the meeting was in favor of refreshments, and the whole matter was left to a committee to whom was voted the usual discretionary power. The meeting then adjourned.

Bellevue Hospital Medical College.—The following changes have lately been made in the Faculty:—Prof. Stephen Smith has resigned the chair of Descriptive and Comparative Anatomy, and Clinical Surgery. Prof. B. W. McCready has resigned the chair of Materia Medica and Therapeutics and Clinical Medicine, and has been appointed Emeritus Professor of Materia Medica and Therapeutics and Professor of Clinical Medicine. Prof. A. B. Crosby has been appointed Professor of General, Descriptive, and Surgical Anatomy. Prof. Wm. A. Hammond has been appointed Professor of Materia Medica and Therapeutics, Diseases of the Mind and Nervous System, and Clinical Medicine. Prof. Hammond will continue his lectures and clinics on Diseases of the Mind and Nervous System as heretofore, lecturing also upon Materia Medica and Therapeutics. Dr. E. G. Janeway has been appointed Prof. of Pathological and Practical Anatomy. As Prof. of Pathological Anatomy, he will deliver in the regular session a course of lectures on that subject. As Prof. of Practical Anatomy, he will perform the duties of Demonstrator of Anatomy. Dr. E. L. Keyes, formerly Lecturer on Dermatology, has been appointed Prof. of Dermatology. Prof. A. B. Mott has been transferred from the chair of Surgical Anatomy, with Operative and Clinical Surgery, to the chair of Clinical and Operative Surgery. Prof. Mott will relinquish his didactic lectures on Surgical Anatomy to the Prof. of Anatomy, and will hold a Surgical Clinic at the college throughout the year.

College of Physicians and Surgeons.—Beecher's Address.—The following extracts from our notes of Rev. Henry Ward Beecher's address to the graduates, at the Commencement of this college, could not find space in the last number.

After encouraging the students to work earnestly and wait patiently for opportunity, recognition and dis-

tinction, sure that finally success would follow desert, the speaker touched upon the motives that should impel and sustain them. The desire of gain, personal ambition, love of scientific truth, sympathy for individual suffering, and the broader sentiment of philanthropy, reinforced by religion, were the steps by which they could mount to a plane of high thought and worthy action.

The spread of culture among the common people was rapidly changing the status of the medical profession, as of every other, curtailing its lower functions, to extend and multiply its higher ones. "Take my own profession," said the speaker. "There was a time when it was hardly right for a man to be born without the priest to sanction it; and all through life, at every turn, he must call in the priestly aid and counsel. Now, men not only are born, but they marry and die without our help; they have appropriated to themselves a thousand offices that were once our sacred and exclusive privilege. But we have gained far more than we have lost; have been deprived of those manifold duties which were hindrances, only to give us freedom for broader and higher growth; and I rejoice in it. So in medicine. The intelligent mother is now your rival. The laity know more than the wisest of you did two or three centuries ago. Yet the field of your own work is not narrowed, but marvellously enlarged; and it is destined to be extended more and more with the advance of science and its popular recognition. It was thought that machines would throw the workman out of employ, but instead they only took slave's toil out of his hands, and drove him into better service, for which they created a new and ever-growing demand.

"You are no longer to be simply ministers of healing to the sick; a large part of your future duty is to be toward the well. The community looks to you to develop and enforce the whole science of private and public hygiene; it looks to you, moreover, for instruction in mental and moral philosophy.

"I do not undertake to say that mental philosophy will ever be established upon the basis of physiology alone; but I do say that without the support of physiology there will never be a stable philosophy. While I believe there is much more blossoms out in mind than mere nerve-substance, yet I believe, also, there are no men in our day so near the secrets to be revealed as the physiologists, none who are so likely to help us throw light upon the mysteries of intelligence itself.

"I said you were to rectify our moral philosophy as well. The law of God was not all written on Mount Sinai; He has been writing upon every mountain since. All of truth is not contained in the inspired record. God has not ceased to think, or to reveal his thought. A part of this revelation is in our own physical constitution; and in the progress of truth we are to learn what is the connection between bodily conditions and moral states. I say, as the result of long observation and experience, that, very largely, the causes of wrong-doing are morbid conditions of body and unfavorable circumstances. We need not fear that this doctrine will destroy responsibility. There is enough in the fact that men know when they are doing wrong to secure that. I aver, then, that a sick man can hardly be a moral man; can hardly conduct himself as a free moral agent, when every nerve and fibre of his body is crowding temptation upon him. There is sin enough in one single organ, the liver, to call it the devil's den. You are to interpret for us this connection between physical and moral disease; to help us clear the way for larger conceptions of life and duty.

"It is impossible that the mass of men can be healthy, and so moral and successful, without some knowledge of their structure and of its laws which they must obey or suffer. How can a young woman be called educated who is ignorant of physiology, of her duties as a mother, of the divine art of nursing? How many men know anything of the relations of waste and supply in the nervous economy? Why, not one man in a hundred knows even what the stomach is made for, and the other ninety-nine are constantly transgressing rules they have never learned. We may take the old parable of the apple in the garden as an illustration of the way men's stomachs make havoc with their moral sense. Not one man in a hundred knows or suspects that God made the air to be breathed. Every part of his house may be reeking with miasma, the cellar full of all evil, the partitions clotted with dormant mischief, and he never dreams of it, but goes on nailing down his windows and listing his doors. If we could only see the air we have once breathed over! Even the architects of our public halls and theatres and churches have the crudest notions of ventilation. I have found sad proof of this in every part of the United States, and you will agree with me that we have no exception here to-night. To whom shall we look for the diffusion of knowledge on these subjects among the people, if not to you? Every family in which you practice should be made a medical school.

"From private hygiene, we pass to public, which we have hardly begun, as yet, to understand and apply. You must take the lead in directing the removal of those great morbific influences that prey upon the life of the community. Thousands upon thousands of cradles are yearly emptied, long streets are turned into shambles, from causes that should not be suffered to exist. The great questions of the sewerage of cities, the draining of morasses, and a hundred others, are pressing upon us for answer; and of whom have we a right to demand it, if not of the medical profession?

"It devolves, then, upon the physicians of this age to make themselves felt as a power in public as well as in private. In every effort to elevate the standard of personal purity; in every discussion of the best means of preventing crime; in every attempt to gain a sounder philosophy of education, and to apply it in the direction of public institutions, or in the training of individual children—the physician is to be not only the adviser of the family, but also the counsellor of the community, whose word should be heeded as always important and often decisive."

Small-pox in New York still holds the weekly average of seventy-four.

Dr. B. F. Miesse, of Chillicothe, Ohio, recently sued for malpractice, has been acquitted. From the evidence given at the trial, it was proved that the case, which was one of fracture of the thigh, was skilfully, carefully, and conscientiously treated. Another case of malpractice is in progress in that vicinity, but if the profession stand by each other as in this case, the result can be easily anticipated.

United States Marine Hospital Service.—Jno. M. Woodworth, Supervising Surgeon U. S. Marine Hospital Service, Treasury Department, submits a comparative statement of the operations of the United States Marine Hospital Service for the six months ending December 31, 1871, and the six months ending December 31, 1870, showing the number of days of hospital relief and the amount of expenditures incurred for the care and treatment of sick and disabled seamen; also the amount of hospital tax collected during the same periods. The reduction of the expenditures during the six months ending December 31, 1871, over the six months

ending December 31, 1870, amounts in the aggregate to over $40,000, which saves seventeen per cent. to the fund. The amount of hospital tax collected during the last six months of 1871 is ten per cent. greater than the amount collected during the corresponding six months of 1870 under the operation of the same law.

Alumni Association Medical Department of the University of New York.—The annual meeting of this Association was held at the Chapel of the Collegiate Reformed Dutch Church, corner Fifth avenue and Twenty-ninth street, on Thursday evening, March 14th, 1872. Dr. F. D. Lente, President, in the Chair. The exercises were opened with prayer, by Prof. Benjamin N. Martin, D.D., L.H.D., followed by appropriate introductory remarks from Prof. Charles A. Budd, class of 1852. Prof. D. B. St. John Roosa, class of 1860, then delivered an excellent and impressive address, in which the following points were dwelt upon. That medical education is to be advanced through the medical colleges; with three exceptions, the medical works published during the past year by a well-known publishing house, were written by professors of medical colleges; and of ten papers read before the Medical Society of the County of New York, during the same period, six were by medical professors; the Harvard Medical School, having raised the standard of medical teaching, should have the profession of New England at its back; the Medical and Surgical Histories, written by Drs. Woodward, Otis, and others, under the direction of the Surgeon-General, cannot be surpassed by foreign authors; the diseases of our day are of a more refined nature than those of a hundred years ago, and paralytic diseases, and those of the eyeball are on the increase—as shown by statistics; many of the teachers in our medical schools, who lecture on special topics, are not allowed to participate in the examination of students for a degree—necessitating a radical change in the present system of medical teaching; in 1841, New York City had only one hundred medical students; now, in three schools, there are over one thousand endowments for professorial chairs; libraries and scholarships are much needed; men who hold four or five hospital appointments, and are candidates for more, should give up some of them to those who would be willing to give the profession the benefit of their experience. The relations of medical men to the laity were fully discussed in the second part of the paper; and an allusion was made to the unwise decision of the governors of the late New York Hospital, in the removal of that time-honored Institution from a section of the city where it was so much needed. He thought if the Medical Board of that hospital had an active part in the management of its affairs, it would have remained on its old site to this day.

Following the acceptance of the paper and benediction, the following business was transacted: Drs. F. D. Lente, James R. Leaming, and James H. Anderson were appointed a Committee to investigate the charges made against the University in an article to appear in the Medical Record. The officers for 1872 are as follows: *President*, James R. Leaming, M.D.; *Vice-Presidents*, Henry S. Hewit, M.D., Solomon S. Satchwell, M.D. of N. C., Charles A. Budd, M.D., Samuel M. Bemiss, M.D. of La., Wm. Canniff, M.D., of Canada, Theo. R. Varick, M.D., of N. J.; *Secretary*, Charles Inslee Pardee, M.D.; *Treasurer*, D. B. St. John Roosa, M.D.; *Orator*, Solomon S. Satchwell, M.D.; *Executive Committee*, Drs. James H. Anderson, Stephen J. Clarke, Francis V. White, F. Le Roy Satterlee, and Joseph T. Monell.

The Presbyterian Hospital, Phila.—At a meeting of the Trustees of this hospital, held Feb. 19th, the following medical officers were elected:—*Consulting Surgeons*, Drs. Samuel D. Gross and D. Hays Agnew; *Consulting Physicians*, Drs. J. L. Ludlow and Jacob M. Da Costa; *Attending Surgeons*, Drs. Thomas B. Reed, Oscar H. Allis, H. Lenox Hodge, and William G. Porter; *Attending Physicians*, Drs. Edward Wallace, S. Weir Mitchell, J. Forsyth Meigs, and D. Flavel Woods; *Obstetricians*, Drs. Robert M. Girvin and John S. Parry; *Ophthalmic Surgeons*, Drs. W. Wallace McClure and George Strawbridge; *Pathologist*, Dr. De Forest Willard.

The Dental Profession.—Oliver Wendell Holmes, M.D., in his address at the Commencement Exercises of the Dental Department in Harvard University, Feb. 14th, after alluding to the fact that the teeth were particular objects of attention in the time of the Egyptians, says that from the time of Galen to the middle of the seventeenth century, he has not found any other traces of a special dental profession until he came upon the following: In the Diary of the Rev. John Ward, Vicar of Stratford-on-Avon, from 1648 to 1679, are these lines: "Uppon a signe about Fleet Bridg this is written, 'Here lives Peter de la Roch and George Gollin, both which, and no other, are sworn operators to the King's teeth.'" In 1820 there was not more than a hundred dentists in the United States. In 1858 there were 4,000. Since then they have increased in as rapid a ratio.—*Boston Med. and Surg. Journal.*

The Medical Department of the University of Pennsylvania, March 12th, graduated a class of eighty-three students. Thirty-four students received diplomas, Feb. 15th, at the Commencement of the Massachusetts Medical College. At the Commencement of the Medical Department of the University of Buffalo, held Feb. 20th, thirty-four students received the degree of Doctor in Medicine from the hands of the Chancellor, Hon. Millard Fillmore. The address to the graduates was delivered by Prof. James P. White.

The Epidemic of Small-Pox in Chicago.—When the epidemic of small-pox commenced in Chicago, an order was passed that, after a certain date, none of those receiving rations and aid from the Relief Society should have any more food, clothing, coal, etc., without presenting a certificate of vaccination, or of revaccination. This legislation, impossible elsewhere, and heretofore, overcame the objections of the ignorant against vaccination, and has served to stamp out the epidemic. One thousand persons were vaccinated daily for several weeks, the expense being borne by the Relief and Aid Society. The highest mortality from this disease in that city, according to the *U. S. Med. and Surg. Journal*, in any one week has been only sixteen.

East River Medical Association, N. Y.—The following officers were recently elected for the ensuing year: *President*, Dr. Henry E. Crampton; *First Vice-President*, Dr. Daniel E. McSweeney; *Second Vice-President*, Dr. Samuel Blume; *Secretary*, Dr. William J. Purcell; *Treasurer*, Dr. Verannus Morse.

Medical Electricity.—Dr. Roberts Bartholow, of Cin., contributes to the *Clinic* of Feb. 24th, with illustrations, an instructive article on Medical Electricity and Medical Electrical Apparatus.

Appointments.—Dr. A. O. Kellogg, for nine years an Assistant Physician in the New York State Lunatic Asylum, has resigned, and accepted a like position in the Hudson River Hospital for the Insane; Dr. J. M. Cleveland, Superintendent. Subsequently, Dr. Judson B. Andrews, Second Assistant Physician in the New York State Lunatic Asylum, was appointed first

Assistant; Dr. Walter Kempster, third Assistant Physician, was appointed second Assistant, and Dr. Daniel H. Kitchen, of New York city, was appointed third Assistant Physician, to fill the vacancy.—*American Journal of Insanity.*

Medical Baronets.—Thirty-one physicians and thirteen surgeons have been created baronets in England since 1645. The first medical baronetcy, that of Sir E. Greaves in 1645, is disputed; but of the second, that of Sir Hans Sloane, practically the founder of the British Museum, there can be no doubt.

New York Medico-Historical Society.—At the annual meeting of this flourishing organization, held recently, the following officers were elected for the ensuing year:—*President*, William T. White, M.D.; *Secretary and Treasurer*, John G. Frazer, M.D.; *Editor*, Alfred E. M. Purdy, M.D.; *Diarist*, Bradford S. Thompson, M.D.

The Witch-Mania of the Seventeenth Century.—Joseph Workman, M.D. (*Am. Journ. of Insanity*), states that it has been calculated that from 1603 to 1680 the total put to death, by regular legal process alone, was about 70,000; and if, in the ten years of exclusion of the Stuarts from the throne, over 35,000 witches were destroyed, the annual number must have been over 35,000, or nearly ten per day, Sundays not excluded.

St. Vincent's Hospital.—From the annual report of this Hospital, founded in 1849, it appears that 965 patients were treated during the past year, of whom 536 were discharged cured, 185 improved, 49 unimproved, 118 died, and 87 remain. In the surgical department, 271 patients were operated on, of whom only 8 died.

Alcoholic Spirits Consumed in the United States.—The cost of the clergy of the United States is estimated at $12,000,000 annually; while that of criminals is $40,000,000, and of spirits $600,000,000. The researches of Otis Clapp, of Boston, Mass., in 1869, give the loss to the productive power of this country, through intemperance, at from 10 to 20 per cent. At 10 per cent. only, the loss on the agricultural and manufacturing interests reaches the sum of $450,000,000. The census of 1870 will probably show this sum to be vastly increased, and perhaps doubled.

Electricity in Diseases of the Skin.—Dr. George M. Beard, New York (*American Journal of Syphilography and Dermatology*) says that it is yet too early to lay down special conclusions concerning the prognosis of different diseases of the skin under electrical treatment; but from what has already been accomplished, the general proposition seems to be justifiable. For many cases of psoriasis, eczema, anæsthesia, pityriasis, and prurigo, that under ordinary treatment are obstinate or incurable, electricity is of such great efficacy, both temporary and permanent, as to entitle it to a very high rank among the resources of the dermatologist.

A New Hospital for Animals has been opened in Dublin, known as the "Brown Institution." A large sum of money was bequeathed for the purpose, in 1852, to the University of London. On the Committee of Directors are Drs. Busk, Carpenter, Gull, Quinn, Sharpey, Sibson, and Simon. Dr. Burdon Sanderson, of University College, has been made professor. It is expected that the institution will add very much to our facilities for acquiring a knowledge of the action of remedies and the causes of disease. Although the laboratory is intended for research rather than instruction, it will be open to all who wish to engage, on their own account, in scientific inquiries, providing they show evidences of previous scientific training, and pay their own expenses.

Alcoholism.—Dr. Paluel de Marmon, of Kingsbridge, N. Y., in a reprint from the *Medical World*, discusses the "Medico-Legal Considerations upon Alcoholism, and the Moral and Criminal Responsibility of Inebriates." He states that in ninety cases of a hundred, drunkenness is first contracted by imitation and politeness; for it is considered very impolite by some to refuse to drink when invited so to do. Another cause rests principally in this country upon the bar-room system. February 1, 1871, there were 7,000 dram-shops or hotels paying license, under the Excise Law, in New York City, and, on the authority of an officer of the department, there was an equal number selling without license, which would make 14,000 drinking places in New York alone—one for every 65 inhabitants. The report of Messrs. Otis Clapp, John E. Tyler, and Wm. B. Spooner, made to the Legislature of Massachusetts, estimates that there are 600,000 persons in the United States who have lost their power of self-control in the use of intoxicating liquors, and that in Massachusetts there are 23,000, of which number two per cent. die each year a drunkard's death. Dr. Marmon suggests the abrogation of the bar-room system as the best means to cut short this human plague.

Demonomania and Witchcraft.—These subjects are pleasantly discussed by Joseph Workman, M.D., in a paper read before the Association of Medical Superintendents of Insane Hospitals, in Toronto, June, 1871, and published in the October No. of the *American Journal of Insanity*. He says that it is not to be expected that the foolish doctrine of belief in diabolic possession, which, less than two centuries ago, pervaded the whole of Christendom, and was preached from every pulpit in our own and mother countries, and proclaimed from every bench of justice, could utterly die out among the uncultured masses in any very short lapse of time. He has met with persons, not insane, who have avowed their belief in its present existence, and relates the case of a clergyman, who fled from the room where an insane woman was suffering from *lycanthropia*, and when he recovered his mental equilibrium, said "O! Doctor! that woman is possessed!"

Customs and Salaries of Physicians before the Christian Era.—Boerhaave observes that before there were any professed physicians, it was the custom among the ancient Egyptians, when any one was sick, to inquire of neighbors and passengers if they knew of any proper remedies for the patient. But ever since the study of physic became a profession, it has been both honorable and lucrative. The customary yearly salary which princes paid their physicians, about the time of Christ's birth, was 250 sestertia, or above 2018*l.* sterling. Stertenius complained that he had only a salary of 500 sestertia, or 4036*l.* 9*s.* 2*d.* sterling, when he had by his private practice 600 sestertia, or 4843*l.* 15*s.*—*Dr. Arbuthnot's Book on Coin, and Mr. William Smith's Book of Remarks on the same Subject.*

New Publications.

Books Received.

Earth as a Topical Application in Surgery. By Addinell Hewson, M.D., Attending Surgeon, Pennsylvania Hospital, Phila.: Lindsay & Blackiston. 1872.

Original Communications.

THE MODERN OPERATION FOR STRABISMUS.

By E. G. LORING, M.D.,

NEW YORK.

READ BEFORE NEW YORK ACADEMY OF MEDICINE, MARCH 7, 1872.

It is with the hope of presenting to those of you who have not time to search through the various monographs for more detailed information, a slight sketch of this important subject as it stands at present among ophthalmologists, that I now offer these remarks, and with the hope of pointing out some of the most important considerations, both as to cause and effect, on a subject in regard to which the general practitioner must oftentimes be consulted prior, if not in preference, to the oculist.

In regard to the etiology of the complaint, it was ascertained by the labors of Donders, and others, that strabismus occurred in 80 to 85 per cent. in hypermetropic eyes, or eyes which were congenitally deficient in focalizing power. Without wishing to impugn this statement in the slightest degree, it has, nevertheless, always struck me that an exaggerated importance has been given, not only by Donders himself, but by all others, in regard to the share which the shortened antero-posterior axis really plays in the production of squint; for it must be borne in mind that emmetropia, or a perfectly normal eye, is a rather poetical condition, and trifling deviations from the normal standard, though sufficient to justify a classification of eyes in regard to refraction, cannot be sufficient to be the active cause of strabismus. Thus it is hardly fair to suppose that a young child who has a strabismus of some 3 or 4 lines, and whose total deviation from the normal standard amounts to a convex glass of $\frac{1}{4}$ or $\frac{1}{5}$, squints, because it is unable to neutralize this very trifling defect by the action of the ciliary muscle. This attributing the production of strabismus almost entirely to the existence of congenital far-sightedness, no matter how trifling it may be, has led Donders and others to criticise somewhat sharply, and somewhat unjustly, the statements made by general practitioners, backed up by those of nurses and mothers, that the squint in a given case had been caused by an attack of measles, whooping-cough, scarlet fever, or any of the thousand and one depressing maladies which are incident to childhood.

Donders has averred that if these cases are critically examined it will almost invariably be found that hypermetropia is at the bottom of the evil; and less renowned and less discriminating practitioners, following in his footsteps, have gravely, if not superciliously, waived away the convictions of the parent and family physician, with the calm assurance that the child was born, if not with the fruits, at least with the seeds of the malady, and the cause to which they attributed the evil had nothing to do with it. Now, I myself have frequently seen strabismus produced in children immediately after some sickness, when there was no error in the optical condition, and pass away again as soon as the strength of the patient was restored, from which I have been forced to the conclusion, rather a self-evident one, I admit, that wherever and from whatever cause the combined force of the ciliary muscle and interni recti is greater than that of the externi, there also strabismus is apt to occur; and that such a state of affairs will take place more frequently in far-sighted eyes than in others, follows as a matter of course.

But the point which I wish to emphasize is, that a transient reduction in nervous force, with over-exertion at such a time, may produce in emmetropic, or even in slightly myopic eyes, precisely the same factors favorable to the production of strabismus which exist through congenital structure in a hypermetropic eye. In other words, that such eyes, under the debilitating influences of disease, do become, practically speaking, for the time being hypermetropic eyes, and are forced, from a reduction in focalizing power, precisely like hypermetropic eyes, to use a disproportionately large amount of accommodation with moderate degrees of convergence.

So, too, a slightly hypermetropic eye, which, while the general health was undisturbed, would never manifest the slightest tendency to turn in, may become, when reduced in strength, equivalent to one of great degree, with its accompanying tendency to become crossed. And the practical lesson which I would draw from this is, that the general practitioner should be particularly on his guard not to permit his young patients, in the earlier days of convalescence, the indiscriminate use of their eyes, especially when confined to the bed, on books and toys and other occupations, which are often carried on with an intensity of purpose and an expenditure of nervous force, which, if applied in its weakened condition to any other organ, would end in its utter overthrow.

The first step in the operation is to pick up the conjunctival and subjunctival tissue lying over the insertion of the tendon to be divided, which should be done with enough firmness to insure a not inconsiderable fold of the conjunctiva between the arms of the forceps; for if this is not done, it will be found that when the opening is made the scissors will glide beneath the conjunctiva alone; and the subconjunctival tissue, together with the extension of the capsule of Tenon, will have to be divided separately, which will necessitate a new hold with the forceps. Nor must the first incision with the scissors be, as is often recommended in the books, immediately at the corneal margin, but removed from it about a line and one-half, and just in front of the implantation of the tendon. This leaves a narrow line or bridge of conjunctival tissue still attached to the cornea, which is often of great service in the finishing of the operation, and which will be further dwelt on.

But the principal difficulty, which is experienced by even those who have performed the operation repeatedly, lies in the easy and successful passing of the hook beneath the muscle so that the insertion shall be plainly exposed. And this difficulty is occasioned by a disregard of the anatomical distribution of the capsule of Tenon. This capsule, as you are aware, starts from the optic foramen, surrounds the optic nerve, and then, spreading out over the bulb, forms a cup-like cavity for the posterior half of the eye, in which the eye revolves. Anterior to the equator, however, the capsule is pierced by the muscles which pass directly through it, to be afterwards implanted in the sclera. At the place of perforation of the muscles the capsule of Tenon sends out reflections, which, joining with the connective-tissue sheaths, extend not only backwards towards the origin of the muscle, but also forwards towards the insertion where the capsule becomes mingled with the conjunctiva. In the anterior part of the eye adhesions also take place between the capsule and the sclera by the means of filamentous bands extending from the former to the latter. The effect of all this is to form, so far as the anterior part of the eye is concerned, a sort of sheath or sleeve in which the muscle is enclosed.

Now the common way of making the opening

into the conjunctiva is to continue with the scissors directly back in a line with the belly of the muscle till it is judged that a sufficient opening is made; the hook is then inserted, and the operator is often surprised to find that, after one or two attempts, it does not glide beneath the tendon. The opening in the conjunctiva is enlarged, when a more determined effort is made, and it is found that this time, although the instrument did not pass cleanly as it should beneath the tendon, the point is covered by some portion of the muscle, which is hastily divided, and the operation is finished as it began, in successive attempts to fish up and divide the remaining attachments of the tendon. Or it may be in another case that, after a little violence, something is felt to give way, and the hook then glides with the utmost ease beneath the muscle, without the operator pausing to think what was the cause of the difficulty in the first place, or the success in the latter. This was evidently due to the fact that the hook, in being rotated to pass behind the muscle, came in contact with the wall formed by the capsule, and either could go no farther, or, by carrying the capsule with it, proceeded far enough to just engage the muscle so as to hook it up by the centre, as it were, without fully passing behind it. Now the density of the capsule varies in different cases, and sometimes with using a little force we are able to push the hook through it, and then of course it is plain sailing. Sometimes, however, the capsule is so strong that the eye is carried before the hook and made to rotate in large circles in the orbit, and the difficulty of getting beneath the tendon is increased.

I think, however, that all these difficulties can be almost invariably avoided if, after getting through the conjunctiva, instead of dissecting directly backwards parallel with the belly of the muscle, we carry the point of the scissors in a bold, free manner obliquely across the insertion of the tendon, almost at right angles to direction of the muscle, till we get into the loose tissue beyond; by this little manœuvre we make a small hole directly through the conjunctiva and subconjunctival tissue, and at the same time through the capsule and the processes which attach the muscle to the sclera. If then, on withdrawing the scissors, we gently raise the edge of the wound, the hook passes with the greatest ease beyond the horizontal edge of the muscle, and falls at once by the well-known movement of rotation directly beneath it, so that when the conjunctiva is gently drawn over the distal end of the hook the tendon lies exposed for its entire length. This being the case, it only remains to divide it, and in doing this it is an essential point never to begin at that part of the hook which is nearest the shank, but at the distal end, and to gently raise the point of the hook as it is gradually dissected out, so as to prevent it from disengaging itself from the muscle till the tendon is thoroughly divided.

It was formerly thought an advantage to make the opening in the conjunctiva as small as possible, and to make the section of the tendon as subconjunctival as circumstances would permit. But dividing the muscle in this way is rather a *tour de force* than any practical advantage, even if it could always be done with certainty, which is by no means the case; and then the original wound has to be enlarged. It is better to make a sufficient opening at the start, and to close it at the end of the operation by bringing the edges of the wound together in the most delicate manner with the finest possible silk, the ends of the suture being cut off as close to the knot as possible. The opening should not be greater, however, than two or two and a half lines. This gentle closure of the wound produces no inflammatory reaction, and the suture comes away of itself, on account of its fineness, after a day or two, almost unperceived.

We come now to the consideration of the later improvements, which are in themselves of a good deal of importance, and often form, indeed, the principal features in the operation. These are the means which we have in our power of increasing or diminishing the effect of the tenotomy. This is done by the use of sutures.

We will take first the suture which is employed to increase the effect of the operation. The most effectual one of which I am aware is that which was first brought into general notice by Dr. Knapp a few years ago, though it had been in use in this country for some time previous. The manner in which it is applied will be better understood by a diagram, which we will suppose represents a pair of eyes in which there is a very pronounced squint of the right eye, say of 5 or even 6 lines. We will suppose that the patient habitually squints with this eye, and that the excursion outwards of this eye, though still good, is somewhat limited, and can only be obtained to a full extent by excessive convergence of the other eye. Under these circumstances we have good reason to believe that the externus, from being constantly on the stretch, has lost some of its elasticity, and will not, by forcibly retracting, draw the eye outwards after its antagonist has been cut. We will suppose that the internus has been divided in the usual way, and that the effect from the causes just mentioned is very small, so small indeed that there is danger of the tendon reapplying itself at or very near the seat of its original implantation. It is manifest that we shall have gained little or nothing by the operation, and it is under these circumstances that the suture renders invaluable service.

Dr. Knapp's description of the method is as follows:—After a thorough tenotomy of the internus, a small fold of the conjunctiva of one or two lines is picked up close to the outer edge of the cornea, a curved needle armed with pearl silk is pushed through it, and the needle then carried through the external commissure from within outwards, and the cornea made to approach the outer angle of the eye to the required amount by drawing on the suture, which is then tied down upon the skin. By this means a fixed position is obtained for an eye which otherwise would have a tendency to turn in, during the time that the tendon is gaining its new attachment, which latter, as the eye is forcibly turned out, must lie further back than otherwise would be the case, and the effect is consequently much increased.

I generally seek to obtain about a line of divergence of the operated eye, immediately after the operation. The suture should be left in one or even two days. It very often comes away of itself on the second day.

Graefe's method of increasing the effect of a tenotomy is as follows:—After the tenotomy of the internus has been thoroughly performed, a fold of the conjunctiva is lifted off from the episcleral tissue with the forceps close to the outer canthus. A curved needle is then run horizontally through this fold into the subconjunctival space and made to glide (the forceps being removed to the upper and inner border of the cornea) beneath the membrane, till a portion of this equal to three, four, or five lines has been included, when the point is again brought out, its place of exit varying according to the length of its subconjunctival passage, its direction being always from the commissure to the upper and inner corneal border, or it may be even to a point above the vertex of the cornea.

The suture is then tightly drawn and tied. By this manœuvre the eye is rolled outwards to the breadth of the enclosed tissue, and the limitation in the movement of the eye inwards is much increased. In this way Graefe says one is enabled to obtain, in excessive degrees of convergent strabismus, any correction desirable. The suture must be left in at least two and a half days.

The suture is employed in precisely the same manner in divergent strabismus, only it starts from the inner canthus near the caruncle. Graefe says that this method has been of signal service to him in the higher grades of strabismus, and that since its adoption he has been far more reserved in the use of the advancement of the muscle. Indeed he asserts that he scarcely ever performs this latter now on account of divergence, but only on account of marked limitation of the mobility inwards.

Such being the means by which the effect of a tenotomy is increased, those by which the effect is diminished remain to be spoken of. This is still done by the use of the suture, and their mode of application will be made clearer, I think, upon the board. We will suppose that in a case of convergent squint we have already divided the internus, and that the effect obtained has been excessive, and that there is fear that the eye will go the other way, or at least there will be an insufficiency of converging power which may impair the use of the eyes for any length of time upon close objects. Our object is to lessen the effect of the original tenotomy, and this is done by the suture, the effect of which is graduated in the following ways: If we have reason to believe that the effect of the tenotomy is only a little more than that which we wished originally to obtain, we simply bring the edges of the wound together in a vertical direction; this of course prevents the muscle from retracting as far as it otherwise would, and the effect of the operation is somewhat limited. We can increase this again by including more or less tissue within the stitch. If we want to limit it to a greater degree, then, instead of passing the needles vertically, we run them obliquely; this of course draws the muscle still more forward, and the effect can be still further increased by including more of the conjunctiva and subconjunctiva tissue between the stitch. Or if, lastly, we wish to reduce the effect to a very considerable degree, we then pass the needle in a directly horizontal direction, taking up more or less of the tissue, according to circumstances.

It has been asserted with a good deal of force, especially by Von Graefe, that the controlling influence of these sutures is such that we can, if the operation has been skilfully performed, invariably get any effect which we may desire. While admitting to the fullest extent their great usefulness, and the very important rôle they play in enabling us to increase and diminish in a general way the effect of a tenotomy, candor compels us to say that they have not in our own hands, nor can we understand from the very nature of things how they can possibly act in anybody's with, that mathematical precision which the great master has claimed for them.

I know of no absolute rules which can be laid down as a guide either as to the immediate or permanent effect of a tenotomy; still there are three things, a careful study of which should never be neglected. First, the condition of the externi and the extent of motion outwards. Secondly, the refraction of the eye; and thirdly, the effect of the accommodation. If, for example, the abduction of the eyes is limited, or only obtained by a vacillating motion as soon as, or shortly after, the squinting eye has passed the median line, it will be safe to predict that a greater setting back of the muscle will be required, and the effect of the operation will have to be increased by dividing both interni,—when under ordinary circumstances we should divide only one,—or, what is better, by the use of the suture. And we may be sure of this even after, the patient being thoroughly narcotized, we find, before we begin the operation, a divergence of the eyes. I have been so often deceived by this amount of divergence when patients are under the influence of an anæsthetic, especially just after the muscle has been divided, that I pay no attention to it when I have once convinced myself that there is some weakness of the externi, but base my calculation entirely on the examinations made before the anæsthetic had been given—and this especially in regard to the suture.

Again we may put it down as a rule (but as a rule that has many exceptions), that the greater the amount of hypermetropia, the greater amount of operating we may do without the fear of obtaining too great an effect. And here I would again insist upon the necessity of reducing the eye—before resorting to repeated operation—by the means of glasses, to as near a condition of a normal eye as possible.

Finally, if the eye swings in suddenly under the influence of the accommodation, so that the squint is disproportionately larger for the near than for the distance, we may assume that the energy of the externi is reduced, and a greater freedom allowed in operating than when the reverse is the case; that is to say, where the squint neutralizes itself somewhat rapidly when we approach an object towards the eye, so that at moderate distances—twelve to sixteen inches—the two eyes seem to be directed to the object. Starting then with the assumption that in an ordinary case of concomitant squint we get from two to three lines as the effect of an operation, the above rules may be of some service in some of the commoner deviations from the general run of cases. But for more than this I should not like to be responsible. I would not wish by this to infer that I consider the operation of strabismus a work of chance, for I sincerely believe that the more fully we understand and the closer we follow the optical and dynamical laws which govern the condition under consideration the more successful we shall be; still I cannot yet believe, however hopeful I may be for the future, in that mathematical exactness which is at present often claimed for it. The only rule which can be conscientiously followed is to estimate by careful study as closely as we can the probable result, and then to operate till success is obtained.

Some eight or ten hours after the operation, or when the narcosis has passed entirely off, the patient should be seen again, when another examination should be made, and this should be done as Graefe has shown, not, as is usually the case, directly in front of the patient, that is, in the median line, but towards the temporal side of the eye which has been operated on, the object being at about fifteen feet from the patient and at about 15° towards the temporal side. This, of course, throws the strain off the divided muscle, and the insufficiency which follows as the immediate effect of the section is reduced, and a more correct estimate of what will be the permanent effect is arrived at. Thus, if the right internus has been divided, the patient should look to the right.

I prefer, however, to make my examination in both places, that is, directly in front, and then towards the temporal side. As a rule, when, on seeing the patient, I find that less effect has been obtained than was estimated, I content myself with leaving things as they are, preferring to operate on the other eye, using the

experience gained as to the effect on the first eye as a guide to the second operation. But whenever my estimation of the antagonistic force of the externi has been so much out of the way that very little or no effect has been produced, and the muscle is in danger of reattaching itself at or very near the place of its original implantation, I never hesitate to interfere; and in this case I always use the suture described by Dr. Knapp, never that by Graefe—the effect of which varies, as he himself allows, in every case according to the different degrees of the elasticity of the conjunctiva. If the patient is an adult, and possesses a moderate degree of nerve, an anæsthetic may be dispensed with. The wound can be reopened and the new and yielding attachments readily severed with the strabismus hook. In children it is better to always use an anæsthetic.

If, however, on the first visit after the operation, there is good reason to fear that too much effect has been obtained, the matter is much more serious, and should be remedied as soon as possible. It is, however, extremely difficult to tell, or at least to lay down any exact rules by which it can be safely judged that too much effect has been obtained. Here it is that the experienced eye has so great an advantage, for any one who has seen and studied a large number of cases can often tell at a glance that too much has been gained, while it would puzzle him to say exactly how he was aware of it. Still the following method of examination has been of service to me in a general way, and as such I now offer it:—

If I find, twelve hours after the operation, that there is a line of divergence when the patient looks at an object, say at fifteen feet, I look upon it not only as no detriment, but a positive advantage for the permanent effect, provided the following conditions exist with it: that the object can be gradually approached towards the patient in the median line without the divergence in the operated eye increasing to any perceptible degree till the object gets inside of 12″ or so. If, on the contrary, the divergence gradually increases, or even remains the same till within 10 or 12″ of the eye, and then the eye suddenly flies out, or even begins to waver, we have cause for apprehension, and the farther that such a condition takes place from the eye, the greater the dread. Again, if we have a line or even more of divergence in the median line for the distance, and this disappears gradually as we carry the object towards the temporal side of the eye operated upon, till the object lies 15° towards that side, we have little dread that the effect is excessive, especially if, as is usually the case, the object can be carried close up to the eyes without the operated eye yielding.

Should, however, the conditions of these two tests not be fulfilled, it would be on the safe side to limit the effect of the operations by the use of the suture, and the quantity of the limitation should be graduated by the degree of the divergence and the distance at which it takes place. The proper amount, or its approximation, can, I think, only be learned by experience, together with a careful consideration as to the effects to be produced by the existing refraction and accommodation.

The elaborate rules laid down by Von Graefe in regard to dynamic squint, or insufficiency, are not, of course, applicable here, as the requisite sharpness of binocular vision very rarely if ever exists to make such tests possible, much less trustworthy. The estimation must be made by the operator's eye, not by means of prisms.

The indications for the operation for strabismus are rapidly becoming better known, so that many more cases come to operation in early life than formerly. Still there is a lingering desire, especially on the part of general practitioners, to advise the parents to wait and see if the child will not grow out of it, and to assert that cross eye often gets well of itself; and if it does not, it will be time enough to talk of an operation when the child has reached 10 or 12 years of age. Now it is true that strabismus does sometimes disappear of itself, but it is an exceedingly rare occurrence; so rare, indeed, as to be the exception necessary to prove the rule that it does not cure itself; and that in the vast majority of cases recourse must be had to an operation. In regard to this there is no division of opinion. But in regard to the time of life at which the operation should be performed there is, I am sorry to say, much less unanimity, and the general profession have certainly the best of excuses for the Fabian policy which they recommend on the authority of some of the greatest writers on this subject. Thus Donders advises the use of "atropine in young children upon whom it is as yet unadvisable to operate." And Stellwag deliberately says that "it is better to postpone the operation till the beginning of puberty, if the strabismus be seen in childhood. By thus delaying, the conditions are fulfilled under which periodical strabismus is removed, and the patient may, as it were, grow out of a squint which has already become permanent."

Notwithstanding the weight of such authority, I am decidedly of the opinion that the cases in which the operation should be deferred to a comparatively remote period are few in proportion to those that should be operated upon as soon as seen. And the chief points which should influence our decision, either pro or con, are as follows:—If the child is very young, say from one to three years, and the squint is concomitant, so that the excursion of the two eyes is equal, and at the same time the squint is bilateral, so that the child fixes sometimes with one eye and sometimes with the other, it will be safe to postpone the operation almost indefinitely, or so long as the conditions described hold good; for under this state of affairs the normal mobility of the eye and the acuity of vision will be maintained; and this rule should be observed all the more if there is hypermetropia, for if this be of any considerable degree the squint will most likely return after the operation, as the age of the patient will prohibit the correction of the optical defect by glasses.

But squint of this character is very rare in infants and young children, as it usually results, not from an optical defect, since the accommodation is not actively employed, but from some paresis of the muscles, so that the squint is confined to one eye, and vision is either entirely performed by the other, or so seldom by the squinting eye that this is practically excluded from the visual act. If such eyes are left to themselves, two things almost invariably occur. 1st. The vision deteriorates, so that the eye in a short time becomes useless. 2d. The externus, from constantly being put upon the stretch, loses its vitality, and the mobility of the eye outwards is so reduced that the eye after a while gets the appearance of being, if I may so express myself, broadside on, producing, as the child grows up, a hideous deformity, and one which later in life requires almost an endless number of operations to remove. If, on the other hand, we operate early, when the weakened muscle still has a considerable share of its vitality left, we can do no possible harm, and we stand the chance of doing infinite good, either by curing the deformity at once, or at least of turning what was a unilateral squint with exclusive use of one eye, into a bilateral squint with the alternate use of the two eyes, thus offering a much increased chance for the preservation of the vision, and a much better prospect

of success from a future operation, when the muscles shall have more fully recovered their tone. In these cases it is almost always necessary to use the suture.

Between the ages of 4 and 6 we begin to get the common concomitant strabismus, dependent on either a congenital defect, that is, hypermetropia, or, what amounts to the same thing, an imitation of this, through the temporary reduction of the accommodative power by some debilitating disease. In this latter condition, that is, when the eye is emmetropic, or even slightly hypermetropic, I never hesitate to operate, firstly, with the hope of restoring binocular vision; and secondly, even if this fails, of removing the deformity; for if this is once done there is little probability of its returning, since, as there is very little or no defect in the refraction, there is no exciting cause to occasion its return. After the age of 7 or 8 years I always operate, and insist, if the error of refraction is sufficient to warrant it, that glasses must be worn.

Thus it will be seen, if these views are correct, that the latitude of operative interference is largely increased, at least in regard to the time of operating, in comparison with what is usually held to be sound practice.

There is one other condition of squint in which the general opinion seems to be adverse to operating, and that is the strabismus of a paralytic nature occurring in adults. This disinclination to operate in these cases evidently had its origin in two sound objections. First, an unwillingness to subject the patient to the pain and annoyance of an operation when his strabismus is either accompanied by, or supposed to be the forerunner of, grave central trouble. Secondly, from a conviction that it was useless to operate on a muscle when the antagonist of that muscle was either partially or wholly paralyzed, as no effect would be gained. In regard to the first of these objections, it is no doubt true that any operative interference would be contra-indicated if central trouble was shown to exist; but there are very many cases in which this does not manifest itself in the slightest degree, either at the time of the attack or later, or, even if it does in the beginning, fades away in a short time, while the strabismus, with its annoying diplopia, remains. Under these conditions it seems to me that the indications for an operation are as strong, if not stronger, than in any other form of strabismus; and that they are so, I think will be more forcibly and more briefly shown by an example which is neither a rare nor an imaginary one.

A man in the prime of life, after some exposure, or an unusually hard day's work, or even after the ordinary routine of the day, goes to bed, as he thinks, perfectly well, and is astonished on waking up in the morning to find that he sees double. He immediately consults his family physician, who at once sees where the trouble lies, and, after a careful examination of his general condition, pronounces it sound, prescribes rest, absence from excitements and all abuses, whether of the spirit or the flesh, and gives iodide of potash in increasing doses. This may or may not have some effect; usually it does not, and then all the changes are rung on the bromides, iodides, tonics, and electricity. Still the double vision persists, and what at first was a simple annoyance now becomes an actual suffering. There is a constant dragging sensation about that side of the head, with pain and tension in the forehead. The patient begins to have a difficulty in getting about, or even at times staggers or misses his footing. It is an exertion for him to think, and he begins to fear that he is getting light-headed, or that something is the matter with his brain; and it is in vain that his physician or an expert assures him to the contrary. To his suggestion, that, as his eye is turned, benefit might be obtained from an operation, it is answered that, as his trouble is of a paralytic nature, it would be worse than useless; that things must be left to take their own course: and if this advice is taken, the diplopia generally fades away in a year or so, but the dragging, wearing, aching sensations in or about the eye usually remain, either as a constant companion, or to be called forth by the slightest over-exertion or excitement.

If, on the other hand, the patient, after a longer or shorter interval, seeks the advice of the trained ophthalmologist, a minute examination is made, and I am afraid, as the usual thing, precisely the same advice is given,—exceptions to this rule, though I am well aware they do exist, being few and far between. Sometimes, however, the oculist consulted, seeing that very little harm can result, boldly makes up his mind to run the chance of doing some good, and is often rewarded for his courage either by the cure or relief of his patient.

The second objection, that we get no effect from the operation when the origin is a paralytic one, fades entirely away, since, by the use of the suture or by advancement of the muscle, we can get any effect we desire, no matter what the cause of the strabismus is.

The treatment of paralytic strabismus is one of the most difficult problems that the ophthalmic surgeon has to deal with, and the differential diagnosis as to what muscles are affected in a given case, as laid down in the books, and upon which we are made to believe our opinions should rest, is a thing which may well appal the boldest. So far as operating is concerned, the practical considerations necessary to determine our opinion, at least in the majority of cases, can be reduced to a comparative few. In the first place, the oblique muscles, whether involved or not, are excluded, from the positions of their insertions, from the category, tenotomy of these muscles never having been, so far as I am aware, followed by successful results. Nor am I personally aware of the attempt ever having been made to cut these tendons, though I have heard traditionary reports to that effect. This limits our attention to the four recti muscles, and in the great majority of the cases it is either the internus or externus which is chiefly affected, and oftener the former than the latter. When the superior and inferior are also implicated it is usually in a secondary degree, and the deviation a trifling one. When, then, a case of simple paralysis, either of the externus or internus, presents itself, I do not hesitate to operate, provided it is not marked by progressive disease of central origin, and provided sufficient time has elapsed to show that therapeutical and hygienic means will not remove the trouble.

The only question, then, is, what operation we shall do; advancement of the paralyzed muscle with a tenotomy of the antagonist, or simply tenotomy of the opposing muscle and the use of the suture? This depends entirely on the degree of the trouble: if the paralysis is complete and the motion towards the median line is very much limited, then resort must be had to advancement of the paralyzed muscle, as laid down in the books. But if the attack is slight, and rather a paresis than a paralysis, or a paralysis improved into paresis, and there is still some motion towards the median line, then a simple tenotomy with the suture will often produce, as Graefe has pointed out, the most astonishing amount of effect.

The fact of other muscles of the ocular group being affected, as for example the superior or inferior rectus, or even the obliques, used to be of great weight with me in determining the propriety of an operation, for it was argued that even if the horizontal double vision

was removed the vertical would remain, and the diplopia, though somewhat different, would still be just as annoying to the patient. But experience has shown me that it is not the actual diplopia which is the chief cause of trouble and annoyance to these patients, but the want of control they have over the eyes, and the subsequent dragging and aching sensations; and this is particularly noticeable when the strabismus is divergent. I should not, therefore, unless the complications were extended and of a grave character, hesitate to operate to remove the lateral strabismus, and let the vertical diplopia take care of itself. I have known 15 or 20 degrees of this to disappear shortly after the lateral deviation had been corrected. But even if this cannot be corrected by a second operation or by prisms, the double images are usually sunk in the course of five or six months, and the patient passes from an improved condition from the day of the operation, into what is ultimately a very comfortable one.

As before remarked, very few of these cases come to operation, and the great mistake which usually takes place in those that do, is that they are operated on too late, when secondary contraction of the antagonist has taken place and the weakened muscle has lost its vitality; and then an advancement has to be performed, and not a tenotomy with the suture.

A short time after the paralytic attack there is generally an effort on the part of nature to re-establish the co-ordinating movements of the eyes, provided the cause is not a central one, and it is during this period that the operation should be performed; and although cases vary, and no rule can be laid down, it is usually best not to wait longer than two months after the original attack.

I would say in conclusion, Mr. President, that I am rather unpleasantly conscious of the fact that the title of my paper has proved to be a misnomer, for instead of being, as I intended, a sketch of the operation for strabismus, as it stands at present, it is only an outline of a small part of it. This has been caused by the vastness of my subject, which has compelled me to leave out much that I wished to write, and to discard much that I had already written. And as it is, I cannot help expressing the fear that my remarks have been both too extended and of too simple a nature for the dignity of the rostrum from which they have been delivered; certainly they have for the critical acumen of many of my hearers. Still they are some of the points of practical importance over which I myself have thought a great deal; and I have believed that they might be of some use to those of you whose practice brings you in contact with many children, in answering the question so often put, Can strabismus be cured?—a question which, though facts do lend it some show of color, is, in the present advanced state of medical art, neither very complimentary to the judgment of the general physician nor to the skill of the ophthalmologist.

Lead Poisoning following the use of a "Hair Renewer."—A case of complete paralysis of the extensor muscles of fingers and hands, with dropping of wrists, is mentioned by J. M. Crocker, M.D., Provincetown, Mass., in the *Boston Med. and Surg. Journal*, produced by the use of a "hair renewer." The preparation consisted of three teaspoonfuls lac sulphur and two teaspoonfuls sugar of lead to a pint of water. With this he had drenched his hair and scalp as often as once a week for 15 years. Under the use of iodide of potassium and galvanism the patient made a good recovery, the hair-dressing having been discontinued.

CASES OF CEREBRO-SPINAL MENINGITIS.

By CHARLES W. PACKARD, M.D.,

NEW YORK.

The following cases of Cerebro-Spinal Meningitis have come under my professional care during the past few weeks.

Annie C., aged seven weeks, was taken with vomiting, restlessness, and fever at eleven P.M., on Saturday, February 24th. On the afternoon of the following day an eruption suddenly appeared, and the mother, becoming alarmed, brought the patient to my office.

I found the infant collapsed, with a cool and pallid surface; pulse slow and somewhat irregular, pupils moderately dilated; and I learned that there had been slight diarrhœa, but no convulsions. The eruption was roseolous in appearance, and ecchymotic. No diagnosis was arrived at, although it was very evident that some active blood-poison was at work. Diffusible stimulants were at once given, but without avail, the case terminating fatally at one A.M. on the following day, 26 hours after the first symptoms of illness were noticed. Soon after death nearly the whole surface of the body became discolored, and of a hue varying from purple to dark-red. No autopsy.

On the afternoon of the same day, on returning from the funeral of the infant, the parents found that their only remaining child, a healthy boy three years of age, was sick with headache, vomiting, and high fever. It was hoped that these symptoms might depend on the fact that he had not slept the night before, owing to the commotion in the room caused by the preparations for the burial of the infant, and to his having eaten a large amount of indigestible food during the day. There was nothing discoverable in his physical condition that is not constantly met with in the ephemeral fever of children.

On the following morning, February 27th, the mother called to inform me that he had passed a restless and feverish night (I have since learned that he had three undoubted convulsions), but that towards morning his bowels acted freely, when his fever left him and he slept quietly. On waking he seemed so playful and well that the further services of a physician were not considered necessary.

At 4 P.M., twenty-four hours after the inception of the disease, the father came in great haste to say, that after having been lively and apparently well all day, the child had suddenly met with "a change" and appeared to be dying. I found him collapsed and insensible, and apparently near death. The face and forehead were pallid and absolutely cold. Temperature in axilla 101°, pulse 84 and irregular, respiration 40 in the minute. Pupils somewhat dilated and variable. There were slight general convulsions at intervals of a few minutes. No abduction of thumbs or toes, nor rigidity of muscles; no eruption. Free stimulation was at once resorted to, and in the course of half an hour a satisfactory reaction had begun. At this stage of the case I invited my friend Dr. Samuel Whitall to assist me in its observation and treatment. We at once catheterized the patient and obtained a specimen of urine which was normal in color and quantity and contained no albumen.

An eruption of petechial spots now suddenly appeared on the body and extremities, being most abundant on the neck and loins. The spots were of the size of flea-bites, though of darker color, and some were of a linear shape, with fine radii upon one side, like the feathers on a quill.

With returning warmth the nervous excitement be-

came intense. There were frequent shudderings, and short general convulsions, incoherence, with occasional shrill outcries that he was falling. At times the delirium assumed a pleasant character for an instant, and the child would smile and utter short sentences, in an urgent, hurried way, such as "Mikey is a good boy," etc.; there was persistent vomiting, and constant movement of the trunk and extremities. The expression of the face indicated the extreme gravity of the disorder. The brow was corrugated, the eyelids of a dusky red, looking just ready to become ecchymotic, the nose was pinched, and the upper lip drawn, and of a deathly pallor, in strong contrast to the brighter color of the cheeks. The movements of the body were unconstrained and natural, except that the head was slightly thrown back.

In view of the almost maniacal condition of the patient, it was thought advisable to begin the administration of opium, which was given in increasing doses, beginning with one drop of the tincture every hour; the dose to be increased according to its effects. Hyd. sub. mur. gr. x. was placed upon the tongue. The quieting effect of the opium soon became apparent. The restlessness subsided, and the convulsions became less and less frequent, and in two hours entirely ceased. The pulse became perfectly regular, but rapidly increased in frequency until in a few hours it had reached 160. Respiration 42 in the minute.

There was little change in the general condition of the patient for the ensuing twenty-four hours, the dose of tr. opii having been meanwhile gradually increased to five drops an hour; but at the end of the second day (forty-eight hours from attack) the violent and noisy excitement returned, and with it the vomiting. There was subsultus and flocculation. The pupils were moderately contracted, but sensible to light; slight strabismus. No return of the convulsions. No new spots had appeared, though a part of the eruption was of a darker color than at first. The bowels had acted twice. Urine now slightly albuminous. The patient became comatose two hours before death, which took place sixty-one hours after the attack.

An autopsy was made 30 hours after death, by Dr. Whitall and myself. Cadaveric rigidity well marked. On inspection the depending portions of the body were found slightly discolored, and the eruption had assumed a darker hue. Upon section the scalp was pale, and no blood followed the knife. Dura mater injected; arachnoid intensely injected and dry, and underneath it an abundant effusion of recent lymph of a gelatinous consistency. This was found most noticeably along the veins of the vertex, the longitudinal fissure, the fissure of Sylvius, and there was also a slight deposit about the optic commissure. The vessels of the medulla were intensely injected, but no exudation had taken place. Cerebral tissue somewhat injected, but of normal consistency. Not more than ʒj. of serum was found in the ventricles. The conditions under which the autopsy was secured rendered it impossible to extend the examination to the spinal cord and its membranes.

The following case occurred during my recent service in St. Luke's Hospital. I am indebted to the resident physician, Dr. Geo. D. Bleything, for the subjoined history and careful record of daily temperatures:—

Annie Frazier, age 19, Eng., married, admitted January 27th, 1872.

One week before admission was troubled with sore throat, pain in the head, and constipation. The day before admission had a severe chill lasting part of the night, and followed by fever and vomiting. On entering the hospital was suffering from severe cephalalgia, and great tenderness and pain in the post cervical region. Some opisthotonos. There are large patches of herpes about the mouth and on the left hand. The limbs are hyperæsthetic, but not swollen, and there is no impairment of motion. No tenderness in abdomen, no spots on any part of body. The right eye seems slightly deflected from a right line, and there is ptosis of right lid. The tongue is yellow-coated, and the fauces reddened. Pulse is full and frequent, and bowels costive. No abnormal sounds heard on auscultation. Is not at all emaciated. Temp. 104°. Ordered Sp. Minder., ʒ ss.; Sol. Magendie, gtt. vj. Jan. 28th.—Slept well last night, but is suffering greatly this morning. The cephalalgia is increased, and tenderness of the muscles in the post-cervical region is very marked. Opisthotonos more decided. There is some tenderness of muscles of trunk and limbs, but no paralysis. Water is passed without difficulty, bowels are costive, face is flushed, pulse dichrotic. Temp. 105°. Ordered Tr. aconite rad., gtt. iij.; Sp. Minder., ʒ ss. every three hours; sherry, beef-tea, broth, and broken ice. Evening: More quiet, continued treatment, and ordered enema. Jan. 29th, symptoms continue with unabated force. Patient was very noisy and somewhat delirious through the night; takes a fair amount of nourishment in fluid and semi-fluid form; calls constantly for ice. Temp. 104°; pulse, 130 and double. Stopped aconite, continued Sp. Mind. and stimulants.

Jan. 30th.—Passed a bad night; was noisy and delirious; applied ice to head, but could not keep it on; vomited a green matter last night and this morning. Tem. 104¾°; ordered Tr. aconite rad., gtt. v.; and to take Quin. sulph., gr. v.; Ac. sulph. dil., gtt. x., bis die; whiskey, ʒ vj.; sherry stopped; beef-tea, chicken, and oyster broth; egg beaten with sherry; milk. Evening: Temp. 104°; ordered Sp. terebinth., ʒ ss. in enema, and sinapism to back of neck.

Jan. 31.—Mind is clear, and headache somewhat less; slept part of the night; still complains of the sub-occipital pain, and also of frontal headache. Temp. 103°; took last night Tr. aconite rad., gtt. vij.; Sp. Mind., ʒ ss. every two hours; stopped this morning and continued quin., etc. Evening: Temp. 102½°; ordered Pulv. ipecac. co., gr. x.

Feb. 1.—Face is flushed, and complains that whiskey makes her head worse; to be diminished to ʒ iv. daily; quinine with iron. Temp., A.M., 102.2; P.M., 102.2.

Feb. 2.—Bowels have not moved since last enema; tongue is a little brown at centre, and white over surface; no spots or tenderness of abdomen; no muscular tenderness or opisthotonos; has lain on right side almost continually until now; this morning is lying on left side; there is still drooping of right lid, and heavy expression of face: slight impairment of hearing. Ord. enema, containing ol. ricini, ʒ ss.; temp. 101°. Evening, not so well; complains of increased headache and cardialgia; coughs, and expectorates a bloody and catarrhal matter, that apparently comes from posterior nares. There is some redness of fauces. Temp., P.M., 104.2. Pulse is full and rapid. Auscultation gives negative results; stopped quin. and ordered sinapisms to epigastrium; to take tr. aconite and sp. Minder. as before.

Feb. 3.—Temp. 201.2. Is much better this morning; stopped aconite; continue stimulants. Evening, increase of fever and headache. Temp. 106.2°; renew aconite, enema to move bowels; sinapism to feet; ice to head.

Feb. 4.—Temp.,	A.M.,	103°;	P.M.,	105
Feb. 5	"	"	102.2	"	105
Feb. 6	"	"	102	"	104.2
Feb. 7	"	"	102	"	104.2
Feb. 8	"	"	103.2	"	104
Feb. 9	"	"	103 2	"	104
Feb. 10	"	"	101.3	"	105
Feb. 11	"	"	104	"	105
Feb. 12	"	"	101	"	104

This morning vomited breakfast, and is coughing and expectorating consistent masses, resembling catarrhal discharges, slightly marked with blood. Fauces no longer reddened, but pallid.

Feb. 13.—Vomited again this morning; other symptoms are unchanged, except that patient had a profuse sweat this morning. Temp., A.M., 103°; P.M., 104°.

Feb. 14—	Temp., A.M.,	102°	; P.M.,	105°.
" 15	" "	98	"	105
" 16	" "	100	"	104
" 17	" "	101	"	104
" 18	" "	104	"	104
" 19	" "	103	"	104
" 20	" "	98	"	98
" 21	" "	98	"	98

Convalescence was now fairly established, and the patient left the hospital Feb. 26th apparently well. Her appetite was good, and she slept soundly every night. There was considerable emaciation and general weakness, such as would be expected after so severe an illness, but no perverted sensation or paralysis.

Remarks.—The diagnosis of this case presented some points of difficulty. In many respects the symptoms resembled those met with in remittent fever occurring in a person of strong hysterical tendencies. Throughout the disease she had a fixed and placid expression of face, and looked as if she would get well. On the other hand, she had only one decided perspiration during her sickness, and quinine in large doses had no effect in checking the exacerbations of fever. For example, on February 15th, the morning temperature had fallen to 98°; twenty grains of quinine were given and retained, and the evening temperature rose to 105°. On the following morning the temperature was 100°; the quinine was repeated, and the evening temperature was 104.°

After this no medication was attempted beyond the exhibition of an opiate at night when the patient was very restless or delirious, the opium having been found to act more efficiently than any of the ordinary substitutes.

The quieting effect of opium was still more marked in the case of the boy above reported. Here the tr. opii. was given in five-drop doses every hour, and its effects carefully watched. There is no doubt in my mind that for twenty-four hours it so far steadied the nervous system as to stop the convulsion, and control the irregular action of the pupils and of the heart. Full narcotism was not produced at any time, the pupils being only moderately contracted, and the respiration never less than 30 in a minute.

205 E. 50th Street, N. Y.

Progress of Medical Science.

Chloroform in the Treatment of Biliary Calculi.—Dr. John Barclay, in a communication to the *British Medical Journal*, mentions the case of a man who had suffered for twenty-three years from gall-stones, and knowing that ethers are solvents of cholesterine, he prescribed chloroform in doses of two or three drops three or four times a day, on the chance of reaching the calculi through the blood. The pain, tenderness, distention, and jaundice, all disappeared together, and in the eight years which have since elapsed, the patient has never had another attack.

Antagonism between Chloral and Calabar Bean.—In five experiments on as many rabbits, fatal doses of the extract of calabar bean were injected hypodermically after the full effects of chloral were produced, with a view to determine how far the poisonous influence of the former was counteracted by the latter. In every case the convulsions were checked, and life prolonged, but death ultimately resulted.

Experiment 6. Three-quarters of a grain of the bean extract injected killed a full-grown rabbit, with violent general convulsions, in six minutes.

Experiment 7. Repeated in a similar rabbit, after fifteen grains of chloral. No general convulsions, but death occurred in two hours and fifty-three minutes.

Experiment 8. Repeated in a rabbit weighing six pounds, after fifteen grains of chloral. No general convulsions, but insensibility and profuse salivation, paralysis, and muscular twitchings; death in one hour and three-quarters.

Experiment 9. Repeated in a rabbit weighing six pounds. Same phenomena produced, lasting three and one-quarter hours, when the animal slowly recovered. Three-quarters of a grain of the extract of calabar bean would probably kill any rabbit in from six to eight minutes. The influence of chloral, in conteracting this result, was most marked, as will be seen by the experiments shown.—*London Practitioner.*

Sulphate of Iron in Suppuration.—A child, burned all over, was lately brought into the hospital. The suppuration from the wounds was so profuse and offensive, that the ward, in which he lay, was almost uninhabitable. He was placed in a bath containing two handfuls of sulphate of iron. The cessation of pain was almost immediate; after repeating the bath twice a day, for fifteen or twenty minutes at a time, the suppuration moderated, the fetid odor disappeared, and the patient rapidly recovered.—*Boston Journal of Chemistry.*

Arsenic in Dyspepsia.—Dr. J. C. Thorowgood, in the *Practitioner*, speaks highly of the action of arsenic in many diseases of the stomach. He has found that one-drop doses of Fowler's solution in half an ounce of infusion of Columba had the effect, in a case he treated, of allaying the pain, stopping the vomiting of food, and enabling the patient to eat and digest small quantities of mutton. He states that the small irritable tongue, with projecting papillæ and yellow or gray fur, indicate arsenic. The more purely local the gastric symptoms, the better is the chance of arsenic doing good. Where there is much general exhaustion of the system, with disordered urine or hepatic congestion, it does not promise much.

New Treatment of Hydrocele.—The *Gazette Hebdomadaire* contains a paper prepared by M. Monod, describing his method of treating hydrocele and other serous accumulations, by injecting alcohol, either pure or diluted. He first makes a puncture and draws off a drachm or more of the fluid, and then injects the alcohol. The operation is repeated, if necessary. By this method he succeeded in curing three cases of hydrocele, and a serous cyst of the neck resembling goitre, the injection of a small quantity of alcohol causing a rapid absorption of the entire fluid without inflammation and without requiring the patients to remain in bed. He suggests the same method for other serous accumulations.—*Pacific Medical and Surgical Journal.*

Dislocation and Fracture of Femur.—Dr. J. R. Weist (*Indiana Journal of Medicine*) reports a case of dislocation of the head of the femur upon the dorsum ilii, in a lady fifty-seven years of age, in which he attempted the reduction six months after the injury. In

the effort at reduction by manipulation, the neck of the femur was fractured near the shaft. The limb was easily brought down on a line with the other, and when left to itself was only shortened from a half to three quarters of an inch. The patient was placed in bed, and tension made for six weeks by means of pulley, weights, and adhesive straps. At the end of this time union seemed to be sufficiently firm, and all dressings were removed, and daily motion of the joint kept up. After walking, shortening increased from a quarter of an inch to an inch and a quarter. A year after the patient could walk quite well without the aid of even a cane. Nearly all the natural motions of the limb could be executed external rotation and abduction being most restricted. The head of the femur remained in about the position it was before the fracture.

Sulphurous Acid in Syphilitic Ulceration.—Dr. Murchison has recently tested this remedy at the Middlesex Hospital, with a favorable result, in the case of an old woman, with tertiary syphilitic ulceration of the pharynx, involving deeply the posterior pillars of the fauces. Iodide of potassium with chlorate of potash was employed internally, and the sulphurous acid (one part to four of water) was used locally in the form of spray. The ulceration was speedily checked, and continued to improve so long as the application was kept up. When the treatment was omitted the ulceration recommenced.—*Richmond and Louisville Med. Journal.*

Chloral Hydrate in Trismus Nascentium.—Dr. F. Auchenthaler relates a case of trismus nascentium occurring in a patient seven days old, and treated by chloral hydrate in doses of grs. vj. dissolved in mother's milk. During the convulsions the medicine was carefully instilled through the nostrils. Immediate benefit was noticed, and in nine days the disease had entirely disappeared. During that time the child had experienced twenty-seven paroxysms, and had taken twenty-five grains of chloral. The temperature of the child's body, during the convulsions, was seldom increased, and at one time rose beyond 70° C.—*American Journal of Medical Sciences.*

An Astringent in Gleet.—Dr. R. S. Johnson extols, for cure of gleet, an astringent injection composed of: ℞. Tr. opii, ʒj.; Tr. catechu, ʒss.; Mist. acaciæ, ʒij.; to be used twice daily. He relates one case in which the discharge ceased after the second application, and did not return.—*Medical Press and Circular.*

On Simple Dislocation of the Os Innominata.—Mr. C. Holthouse, of Westminster Hospital (*The Practitioner*), reports two cases of this nature, which he has recently met with in his practice, and gives the notes of the only other cases, five in all, which had been previously published by other surgeons, in only three or four of which had the injury been diagnosticated during the life of the patient. Of the cases narrated, including his own, two were caused by falls from a height, one by heavy weights falling on the front of the pelvis, two by pressure, and two by blows. In most of them the displacement was upwards and backwards.

The only accidents with which this injury is likely to be confounded are fractures of the pelvis, and of the cervix femoris. The method of measuring the degree of shortening from the iliac spine to the lower border of the patella will exclude the latter; the true character of the injury being indicated by the mobility of one side of the pelvis, and the absence of true bony crepitus. Five of the cases reported recovered with more or less laming. Mr. Holthouse considers a favorable prognosis warrantable, especially in the case of a young subject and when uncomplicated. There seemed to be no reason why, with moderate extension, manipulation, and a sustaining bandage, these cases might not have recovered with very little deformity.

Iodide of Starch Poultice for Sloughing Ulcers, etc.—Take two ounces of starch and mix with six ounces of boiling water, to form a jelly; then add, before cold, half an ounce of tincture of iodine. The poultice is now ready for use.

Modification of the Ordinary Tests for Biliary Acids.—M. Strassburg, of Bremen, suggests a modification of Pettenkofer's test for the presence of the biliary acids in urine, which promises to be serviceable clinically, and, according to his statements, is of extreme delicacy, enabling a trace not exceeding $\frac{1}{100^3000}$ to be readily detected. He dips a slip of filtering paper into the urine suspected to contain the biliary acids, and to which a little cane sugar has been previously added. The slip is withdrawn and dried; a drop of pure, concentrated sulphuric acid is now applied to it by means of a glass rod. On holding the paper up to a strong light, a beautiful violet color makes its appearance.—*Flüger's Archiv. The Practitioner.*

A New Sedative.—Prof. Deneffe, of Ghent, states that for more than two years he has employed a combination of camphor and bromine, which he thinks entitled to general attention. The celebrated chemist Laurent showed that bromine will easily unite with camphor at ordinary temperatures, but that the product is slowly decomposed by exposure to air. Prof. Schwartz, of Ghent, has shown that this substance, being heated in a closed vessel, is resolved into hydrobromic acid and a crystallized compound, differing only from ordinary camphor by the substitution of an atom of bromine for an atom of hydrogen. This substance is perfectly crystallizable, fusible at 76° C., and boiling at 274°. Investigation of the therapeutical properties of the drug has shown it to be an excellent nervous sedative. Prof. Deneffe publishes a case of excitement of the nervous system, which was effectually relieved by it; seventy grains may be made into thirty pills, of which one is a dose, and may be repeated every hour, if occasion requires.—*Times and Gazette.*

Scurvy.—In the report in the *Archives Générales de Médecine*, by Drs. Ch. Lasègue and A. Legroux, of the epidemic of scurvy which took place in the prisons of the Seine and the Hôpital de la Pitié, in September, 1870 (during the siege), the curious fact is noted that in the eighty-three cases which fell under their observation, none of the patients were females, although the conditions of privation were the same in the cases of both sexes.

The Oxalate of Potash, in the treatment of peritonitis, is recommended in the *Jour. de Méd. et de Chir.*, small doses in mucilage, repeated every hour, having produced good results in three cases of puerperal origin.

Quinine and Digitalis in Hemicrania.—The same journal states that MM. Dèbout and Gauchet have obtained good results from this combination of remedies in the treatment of *migraine*, the formula employed being, sulphate of quinine forty-six grains, powdered digitalis twenty-two grains, of syrup q. s., to be made into thirty pills, of which one may be taken every evening. Attacks connected with the menstrual period seem to be most easily controlled by it.—*The Practitioner.*

Puncturation in the Treatment of Strangulated Hernia is spoken of by Dr. Autun, in the *Gazette des Hôpitaux*, several cases being mentioned by him in

which the extraction of gas and air by the operation rendered the reduction of the hernia possible. No bad results occurred.

Hydrochlorate of Amorphia.—*The Edinburg Medical Journal* takes from the *Berliner Klinische Wochenschrift* the following description of a drug about which but little is generally known. Siebert, Riegel, and Böhme have ascertained, by numerous experiments on man and animals, that it is an effectual and active emetic, acting, according to Böhme, in from four to sixteen minutes, leaving behind it no unpleasant effects, and possessing the important quality that it can be effectually introduced subcutaneously—a matter of importance in children, insane, and comatose patients. The unpleasant effects have occasionally been giddiness, cerebral oppression, tendency to yawn, and precordial anxiety; and even these disappeared with the occurrence of vomiting. No disagreable results on the digestive organs were ever observed, and suppuration never took place at the point of injection. The physiological effects upon the pulse, temperature, and blood-pressure, were found by Siebert to be of no practical importance. The quantity necessary to produce emesis in man, when used hypodermically, is 0.0925 to 0.108 gr. The most reliable preparation is said by these observers to be that of Maclarlan & Co., of Edinburg.

Similarity in the Clinical Appearances of Ovaritis and Typhoid Fever.—A writer in *The Lancet* of February 24th speaks of a case of the former affection under the care of Dr. Ramskill, in the London Hospital, in which, for twenty days, there had been a temperature ranging between 99.5° and 105°. There had, also, been considerable dulness of intellect during this period, together with marked tenderness in the right iliac region and considerable diarrhœa, the stools being very like those characteristic of typhoid fever.

Ligation of the External Iliac Artery, high up in the right side, has recently been performed by Dr. Butcher, of Dublin, in a man sixty-eight years old. Thirty-five days after the operation the ligatures came away, and by a fortnight later the wound was quite healed, and the temperature and sensibility of the limb restored, the aneurismal tumor having been reduced to about the size of a billiard-ball, and become quite firm and hard. The time occupied in the operation was nine minutes, and the necessity for its performance was the presence of an inguinal aneurism, which was so large as to extend above Poupart's ligament.

Liebreich on Chloral Hydrate.—In the *Gazette Hebdomadaire* for Dec. is an article by Prof. Liebreich, in which the conditions of the use of chloral are laid down more definitely than they have been heretofore. All cases of insomnia without fever form the basis of its application. For the relief of severe pain it cannot be depended on without the addition of opiates. The contraindications pointed out by Liebreich are as follows:—

1. Extended destruction of the mucous surfaces of the *prima viæ*. Here the remedy, if used, must be much diluted with mucilage; or it may be thrown into the rectum.

2. Arthritic conditions are unfavorable, unless the blood be first rendered alkaline.

3. In typhus, if given, it should be in small doses.

4. In affections of the circulatory apparatus, especially valvular and other serious troubles of the heart, small doses should be used.

5. It is contraindicated in hysteria, in which it often increases and fixes the condition of excitement, which Prof. Liebreich considers inexplicable.

6. Whether or not it is contraindicated in icterus remains doubtful, it having been so asserted.

The author goes on to say that it should never be given in substance, nor in solution stronger than twenty parts to a hundred.

It may be mixed with beer, wine, beef-tea, and mucilage. He prefers syrup of orange-peel. The so-called syrups of chloral hydrate are solutions in glycerine with sugar. Thin gruel may be employed as a vehicle for an enema. In certain convulsive attacks it may be applied hypodermically. The cigarettes which have been proposed are inadmissable. The best dose for an adult is from thirty to forty-five grains. Habitual use does not require increase of dose. "Long-continued use does not impair the general health. I know persons who have taken it almost since its introduction, in the same dose, and with the same success."—*The Doctor.*

[Dr. Squibb, of Brooklyn, says that solutions of chloral hydrate with syrup undergo decomposition into, as yet, unknown substances which are as likely to be poisonous as benign, and advises that if mixed with syrup it should only be for immediate use. Cases have been observed in which the long-continued use of the remedy has occasioned, it is thought, pains resembling those of arthritic origin.]

Local Treatment of the Uterus.—R. A. Quarles, M.D., of St. Louis, Mo. (*St. Louis Med. and Surg. Journal*), in his Annual Report of the St. Louis Institute for the Treatment of Diseases of Women, mentions that tincture of iodine (gr. 90 to ℥j.) has been in almost constant use in treating hypertrophies, chronic engorgements, catarrhs and inflammations of the womb and its lining membrane. Erosions of the os have yielded most readily to a strong solution of nitrate of silver. In almost all cases of uterine disease, warm water vaginal injections were employed, medicated or not, as the individual case required. For all cases of vaginitis, whether specific or not, balsamum copaibæ injection proved an unfailing remedy.

Thapsia as a Rubefacient and Revulsive.—The action of this plant (one of the umbelliferæ) is very persistent, differing, in this respect, from the ordinary rubefacients. It may, therefore, be regarded not merely as an accessory therapeutic agent, but as an independent remedy to be used with advantage in many affections of the vascular and nervous systems associated with painful hyperæsthesia, which it seems to remove in a very noticeable manner. Dr. Armand has found its use of great service in inflammatory diseases of the chest and of the larynx, when, in the latter, there was a considerable amount of piping and whistling in respiration, and great sensitiveness of the surface; and equally valuable in angina faucium. It may be used for children as well as adults.—*Allgem. Wiener Med. Zeitung.*

Peliosis Rheumatica.—Dr. W. A. Hardway, of St. Louis, Mo. (*St. Louis Med. and Surg. Journ.*), presents a case of this quite uncommon affection, occurring in a lad of 16, which exhibited features in common with ordinary rheumatism, and might be taken for a case of that nature, the eruption having been regarded as of incidental occurrence. The fact, however, of the petechiæ and the rheumatic pains being nearly always coincident events, the absence of the elevated temperature and more rapid pulse of acute rheumatism, together with the subsequent course of the disease, clearly pointed out the distinction. Again, from the general *malaise*, the eruption, the pains, peliosis rheu-

matica might be mistaken for an early syphilitic manifestation; but the absence, after careful examination, of any primary lesion, and of a venereal history, would settle the question satisfactorily.

The Uses of Pus in the Animal Economy.—Dr. A P. Reid, of Halifax (*Canada Med. Journal*), writes, in regard to the use of pus in the animal economy, as follows:—

1st. It is the method by which dead exudation corpuscles and fluids assume a condition allowing of their subsequent removal by a channel which is not necessarily injurious to the system at large, as they would be if permitted to enter the blood, to be expelled by the emunctories.

2d. It is the method by which the before-mentioned matters so collected together, when, from favoring circumstances, they cease to produce irritation in their vicinity, are absorbed or removed by the emunctories; the solid parts first having undergone a fatty transformation, owing to the influence exerted on them by the free circulation of blood in the walls of the abscess.

3d. It is the method by which dead exudation material finally becomes incapsulated. The abscess ceasing to produce inflammation in its vicinity, the free circulation of blood in the abscess wall exerts such changes in the composition of the fluid parts of the pus as permit of their absorption without injury to the health of the solid part, which cannot be so dealt with, and which becomes inspissated in the form of innocuous substances, such as fat, phosphate of lime, carbonate of lime, and other salts, united by an indeterminate animal matter.

4th. It is the method by which tissues of all kinds, when deprived of their vitality, are reduced to a fluid capable of easy removal; as the contents of an abscess.

5th. It is the method adopted by Nature to assist vital absorption in amputating dead tissues, either externally or internally.

6th. It is the method which assists ulcerative absorption, so termed, in bringing an abscess to the surface; one portion or side of the abscess wall becoming gradually thinner as the abscess points.

Chloride of Zinc with Chloride of Potassium.—Ordinary chloride of zinc is unsatisfactory as an escharotic, because of its hygroscopic tendency. M. Bruns (pharmacist) states this defect may be overcome by fusing two parts of the chloride of zinc with one of the chloride of potassium, and casting in sticks which are to be wrapped in tin foil.

Forced Delivery.—T. A. McKinney, M.D. (*Leav. Medical Herald*), communicates an interesting case of puerperal convulsions, with attending pneumonia, showing the following points of interest: 1st. Forced delivery is not unfrequently the only remedy for puerperal convulsions. 2d. Delivery may be undertaken after the seventh month without danger, when the os is but very little dilated, though there may be no signs of labor near. 3d. Pneumonia, caused possibly by a poisoned state of the blood, may be a complication of puerperal convulsions, though not always a fatal one.

Treatment of Blennorrhagia.—Eleven cases of blennorhagia are related by J. C. Van Wyck, M.D., of Oakland, Cal. (*Western Lancet*), in which treatment by carbolic acid, in combination with astringents and anodynes, was, he states, as near being a specific in uncomplicated cases as any remedy believed to be such in the domain of the materia medica. So firmly is he convinced that to it alone are to be attributed the gratifying results which have marked every case in which it was employed, that with the next patient who comes under his care he will use the remedy simply diluted with distilled water.

The Use of Alcohol in Chronic Otorrhœa.—A. W. Calhoun, M.D., now of Berlin, Prussia (*Georgia Med. Comp.*), having been sceptical in regard to the beneficial use of pure undiluted alcohol for the cure of uncomplicated chronic purulent otitis, or otorrhœa, as practised in the clinic of Dr. Weber, one of the editors of the *Monatschrift für Ohrenheilkunde*, writes that he has been enabled to follow a number of cases, as they progressed under this treatment, from the date of their first entrance into the Clinic till their discharge as cured—and is now thoroughly satisfied of its efficacy, having seen cases of eight and ten years' standing, with destruction of membrana tympani, cured in comparatively short time. The application of undiluted alcohol does not produce intense pain; for a few moments there is a smarting, slightly burning feeling, which gives place to a sensation described by patients as that of an "agreeable warmth." This latter lasts for a considerable time.

Tænia Solium and Tænia Lata in a Child Three Years Old.—A case of this character, occurring in a boy three years and four months old, is reported by Dr. Joseph Ganghofer, in the *Kansas City Medical Journal*. The child had excessive craving for carrots, of which he would daily consume large quantities, both cooked and raw. After persisting in this unnatural appetite for six weeks, a *tænia solium* of about eleven feet in length was passed. The morbid appetite of the patient still continued, and, on account of the largely distended abdomen, the carrot treatment was advised. Within two weeks another worm was passed; this time a *tænia lata* ten feet long, which came away entire, inclusive of the head.

Dr. Ganghofer remarks that the use of carrots as a domestic anthelmintic in cases of ascarides and lumbrici is no novelty, but their efficacy in dislodging the different varieties of tape-worm has never before been established. It would appear that the large amount of saccharine matter contained in the vegetable must have sickened the parasite, and thus have caused its detachment from the walls of the intestine.

Treatment of Cystitis and Irritable Bladder of Females.—M. Yarnall, M.D., St. Louis, Mo. (*The Med. Archives*), calls attention to a treatment for cystitis and irritable bladder of females, practised by Dr. T. L. Papin, which has afforded such excellent results. This treatment, which is original with Dr. Papin, consists in dilating the urethra with a long pair of dressing forceps to such an extent as to produce temporary incontinence of urine by rupturing a few of the fibres of the sphincter of the bladder; and repeating the operation, when necessary, at intervals of a week or more, until the patient is completely relieved. In nearly every instance the relief afforded is almost immediate, but in the course of a few days the irritability of the bladder ussually returns, when the operation has to be repeated, and, if necessary, again repeated, until a cure is accomplished.

The operation being at first very painful, it will usually be found necessary, in performing it the first time, to place the patient under the influence of an anæsthetic; but its subsequent performance being much less severe, as a rule, the anæsthetic will be unnecessary unless the patient be of a very nervous temperament. Of the twenty cases thus far treated, eleven have been

entirely relieved, and eight, still under treatment, have been benefited, with a prospect of permanent relief. In only one case has it failed, a very hysterical individual addicted to the excessive use of narcotics, and with whom the trouble originated, probably, in the overwrought mental condition of the patient rather than the vesical irritation; and even here the patient was unquestionably benefited.

Rabies.—M. Auzias Turenne endeavors to establish a parallel between the phenomena of rabies and those of syphilis. It will be remembered that Marochetti considered that the virus, after having been absorbed by the wound, enters the circulation and then gathers under the tongue. From the third to the ninth day, small vesicles containing the virus appear on each side of the frænum linguæ, and are called lyssæ. He believes that by cauterizing these vesicles the further progress of the disease would be prevented. Experience has not confirmed these views, but M. Turenne, starting from the phenomena, has attempted to liken rabies to syphilis, and the lyssæ to the infecting chancre.—*Dominion Medical Journal.*

Constipation.—Dr. Henry Field strongly recommends the arsenite of iron in the constipation attending uterine disease. Oxalate of iron is also recommended.

Bromide of Potassium in Whooping-cough.—Dr. Beaufort uses the bromide with syr. of Tolu and an alcoholic preparation of aconite, combined together, and by the aid of these three remedies he has seen the disease cured in an average of twelve days.

Citric Acid in After-Pains.—Dr. J. B. Chagnon (*Canada Medical Journal*) has used citric acid in parturient women with the most happy results. It not only acts as a nervine (?), but also as the best prophylactic against inflammations, such as metritis, peritonitis, etc. He gives it to relieve after-pains in the doses of five grains in a wine-glass of water every five hours.

Tincture of Gelsemium in Tetanus.—In the *Baltimore Medical Journal* is recorded a recovery from tetanus, for which gelsemium was administered. The disease lasted seventeen days, during which time twenty ounces of the tincture were taken. During the first twelve days the patient took from half a drachm to two drachms every hour.

Injury of the Eye.—Dr. H. M. Sogie (*Ohio Medical and Surgical Reporter*) reports the following case, which occurred in his practice: A man was blown out of a mill by the explosion of a boiler. He received, along with other injuries, a wound over the supra-orbital arch. The iris was seen to be detached at its upper border for about one-fifth of its circumference, and it hung down near the middle of the lens, which was not detached from its place. There was but little hemorrhage, and but slight iritis followed the accident. After the patient had recovered from the other injuries (fracture of both limbs) the sight remained unimpaired, except in so far as it was interfered with by the mal-position of the iris.

On the Growth of the Nails as a Means of Prognosis in Cerebral Paralysis.—Dr. S. W. Mitchel (*American Journal of Medical Sciences*) states that he has observed in several cases of paralysis that the nails of the limbs of the affected side, on the occurrence of the accident, ceased to grow. This was proved by staining the roots of the nails with nitric acid. He was able to predict, in seeing after a time a white line of nail making its appearance, and before there were any other signs of improvement, that power was about to return to the limb, and that voluntary motion would shortly be restored.

Absence of a Lung.—Dr. W. Dickey communicates to the *Cincinnati Lancet and Observer* an extremely interesting history of a case which had been under his care, and concludes by giving the following account of the autopsy, made twelve hours after death. The left lung was found studded with tubercles, and was somewhat larger than usual, but consisted of two lobes. On the right side there was no lung at all, not even a rudiment at the bifurcation. No lung had ever existed. Heart in the mediastinal space, but in the right side, corresponding to a natural situation in the left. Its walls were thickened, and cavities somewhat enlarged.

Manual Force to the Uterus as an Adjuvant in Labor.—Dr. J. H. Grant (*New Orleans Journal of Medicine*) advocates the application of physical force to the fundus uteri during labor, and gives the histories of five cases, where it was applied with most manifest influence for good in hastening the birth of the child. His plan is to apply both hands over the fundus uteri, and exert the force in the longitudinal diameter. In some of these cases the strength of one assistant not being deemed sufficient, the hands of a second person were spread over those of the first, and their united efforts produced the happiest results. Where the pains were insufficient, the physical pressure served to increase them, thus "obviating the use of forceps and turning, except in cases of malposition of the fœtus."

Efficacy of Large Draughts of Water in Poisoning.—*The New Orleans Journal of Medicine* contains the history of a case of poisoning by corrosive sublimate. The patient had taken a large dose of the poison. The lips and mouth were much swollen; there were violent pain and burning heat in the stomach, and he was extremely ill. He was ordered to drink at intervals, but as speedily as possible, twelve pints of warm water, and that as often as he should vomit he should drink more. As soon as, by the pains, it was perceived the poison had entered the bowels, the patient was ordered large injections of simply tepid water. The first evacuations of the stomach were extremely acrid, on account of the quantity of the poison which they contained; subsequent ones were less and less acrid with each evacuation, until they became completely free. The colics which came on were treated by fresh clysters. These simple means were so successful that in a few hours the patient was out of danger.

Case of Tetanus Cured by Excision of a Nerve.—Dr. George E. Foster (*Boston Medical and Surgical Journal*) communicates a case of tetanus, following a wound made by a shoe-nail entering the heel. The wound healed, leaving no trace of the injury. About three weeks after, the patient was awakened in the night with chills, stiffness of the limbs, and slight twitching of the muscles of the arm. He was given all the suitable medicines, but with no effect to mitigate the symptoms. It was then decided to cut down and remove a portion of the internal plantar nerve, which was done with the effect of entirely relieving the spasms. The patient afterwards had a complete recovery.

Gossypium as an Anodyne.—Dr. Robert E. Peyton (*Richmond and Louisville Med. Journ.*), relates a distressing case of phthisis pulmonalis, in which, after giving other remedies unsatisfactorily, teaspoonful doses of the fluid extract of cotton-root gave the patient much relief.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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HOSPITAL APPOINTMENTS.

It has become so much the fashion in making hospital appointments to allow almost every consideration save professional ability to influence the appointing power, that the prospect of reform seems an almost hopeless one. We are so firmly convinced, however, that there must be some remedy for the evils connected with the practice, that we are determined to make every effort to discover it. We are perfectly aware of the fact that every applicant for a position in the hospital cannot expect to be successful, but, in view of the large number of capable men who do apply, we have a right to complain when the selections are not extraordinarily good ones.

From present indications there appears to be no possible excuse for the ordinary and generally accepted method of filling the professional positions in our large hospitals save partizanship, or gross favoritism. Since our last remarks upon this subject, three hospitals have sprung into existence in our midst, the positions in all of which have been duly filled. No one acquainted with the requisites for obtaining such appointments is surprised at the list of the attending physicians and surgeons. The reasons why such and such men hold such positions are very easily explained. Here, for instance, is a college which must have nearly every member of its faculty in a hospital position, and when each member of said faculty who desires such an appointment is satisfied, it so happens that there are no places for any one else. The appointing power of another hospital is given to a single medical gentleman; and if he is connected with any particular school, as he is most sure to be, so much the better for the school. If he has friends or relatives whom he wishes to advance, no one seems to question his right to find positions for them not only in the hospital, but in the college—in fact, in the interests of the school he represents, both appointments must go together. In a hospital in which all the schools have a right to be represented, there are many tricks played, and many subterfuges resorted to in order to have a majority representation, which, if the said manœuvres were not made by some of our leading teachers, we should be privileged in calling them unprofessional, disgraceful, and ungentlemanly.

We are perfectly willing that clinical teachers should hold hospital positions, in fact it is very necessary that they should; but we claim that all the clinical teachers are not in our colleges. We fail to see how any college, because it chooses to elect any one professor, can insist that such a gentleman must necessarily be a clinical teacher, and must, as a matter of course, hold a hospital appointment. Instead of colleges making clinical teachers, the clinical teachers should make the colleges. Many of the best clinical teachers we have seen, never held any chair in our college faculties, and we have a good reason for supposing that there are many more of the same sort who could use a hospital position to equally good advantage, if the colleges would graciously allow them the chance. If the colleges would sometimes stop to consider how many good clinical teachers they might obtain by allowing an occasional outsider to hold a hospital position, and prove himself, by his work alone, worthy of a position as professor, we should have more men created for places, than places created for men. We are interested in the prosperity of the colleges, but the colleges cannot reasonably be expected to mean the profession. A gentleman who may have quietly devoted himself to his profession, who may have worked faithfully in a dispensary, and may have a peculiar fitness for hospital work and for clinical teaching, and who may be a thoroughly practical man, may perchance be of as much service in a public institution as if he were connected with some college. If we are mistaken in this, and if our colleges contain all the good and capable medical men, we are forced to the humiliating confession that by far the largest majority of the so-called profession are good for nothing. If we allow the colleges to monopolize all the hospital appointments, and tacitly acknowledge their right to dictate to such as are unfortunate enough to be mere practitioners, we cannot escape the legitimate conclusion that the profession have no rights whatever in the matter. This is in fact quite evident from the appointments recently made in the hospitals named.

We are emphatically opposed to all party influences in making these appointments, and believe that every man who applies for a position should have his claims impartially considered. We care not whether he be a professor or a "possessor," or both; we, in the interests of the profession at large, call for fair play. When a hospital staff is to be selected, let the fact be duly advertised; let each applicant for the place present his credentials and his claims, and let these alone be the bases upon which his position is secured. Why is it

necessary to keep the fact that appointments are to be made so quiet? Why is it necessary to keep every one who might be induced to apply, in ignorance until all the places are filled? Why is this done, if not with the avowed object of monopolizing honorable positions and stifling legitimate endeavor?

On a future occasion we shall present some of the details by which hospital appointments are secured to the select few. If any of our readers have any facts to communicate bearing upon this point, we shall use them in such a way as shall tend to promote the best interests of the profession, and the greatest good to our public institutions. Our sole aim shall be to ventilate the subject with a view to reform and to reform only, entirely independent of every other consideration but simple justice. We believe that this and a great many other matters connected with our hospital management need looking into, and we are ready and willing to discuss them.

AMERICAN MEDICAL ASSOCIATION.

The next meeting of the American Medical Association, to be held in Philadelphia, promises to be unusually interesting. It is the determination of the Committee of Arrangements for that city to contribute in every possible way to the comfort and edification of the delegates. There is no doubt that there will be a very full attendance. New York will, we are assured, be particularly well represented. It is to be hoped that the meeting will be a harmonious one, and that those who attend will be spared the discussion of several of the vexed and useless questions which have occupied so much time during the last few sessions. In another column we publish some details regarding arrangements made with the railroads for excursion tickets, etc.

Reviews and Notices of Books.

Lectures on the Clinical Uses of Electricity. By J. Russell Reynolds, M.D. Philadelphia: Lindsay & Blakiston. 1872.

Electricity in its Relations to Practical Medicine. By Dr. Moritz Meyer. Second revised and American edition. Translated by Wm. A. Hammond, M.D. New York: 1872. D. Appleton & Co.

Dr. Reynolds is one of the ablest and most cultivated physicians of London. On nearly all subjects of general medicine he writes sensibly and clearly, and to electro-therapeutics he has given more attention than the majority of even the most advanced practitioners.

This little work is perhaps all that it professes to be—a clear and succinct statement, in language to suit the mind of the beginner, of some of the elementary principles of localized electricism. So far as it goes—which is not very far—it is unusually clear. Its strong merits are lucidness and common sense. Its omissions are, of course, enormous; it gives but the alphabet of electro-therapeutics; the author is, to say the least, ten years behind the time; and yet very few writers on general medicine is as well advanced in electro-therapeutics as he. He does not fully comprehend the position of electricity in the materia medica, but he comes nearer to the truth than most writers on the subject. He does not mention the majority of the diseases in which it is most successful. His experience, though intelligent, is evidently limited and narrow. To depend on such manuals for our knowledge of electro-therapeutics would be a most serious mistake.

Elementary lectures of this kind are more needed in London than almost anywhere else, for it is true, as Prof. Huxley says, that, excepting in political economy and geology, English scientists are behindhand in science. Save Althaus and a very few others, the London physicians, as were shown by a recent controversy, in the medical journals, between Drs. Gull and Anstie, are only just beginning to open their eyes to the subject of electro-therapeutics. In no other great medical centre would the adverse opinion even of so high an authority as Dr. Gull have been thought worthy of a moment's consideration from any intelligent human being.

There are three points in this work of Dr. Reynolds, that are of themselves worth the price of the book, especially for those who blindly follow in the wake of Duchenne and Remak. These points are:—

1. The differential action of the currents of the primary and the secondary coil.
2. The differential action of the two currents.
3. The differential action of the ascending and descending currents.

There are now in this country a very large number of physicians, young and old, who are diligently investigating the subject of electro-therapeutics, and who would do well to obtain this little work of Dr. Reynolds, imperfect as it is, and to study it in connection with other text books of the subject, chiefly as a compliment to its clearness, fairness, and good sense. It is safe to assert that at the present time there is more doing in electro-therapeutics in the United States, both in the way of original research and in the way of popularization than in Great Britain or France or Germany. Like surgery, it has become an American science. All the American apparatus for medical and surgical electricity are equal to, and very often incomparably superior to, those of European manufacture. If we are to maintain this advanced position, we should impartially and carefully avail ourselves of the best fruits of modern research in every direction. It is necessary to sow beside all waters. There is no book on electro-therapeutics so poor but that it may teach us something of real value, or at least give us suggestions by means of which we may be enabled to pursue our investigations with greater intelligence and success. Every publication on the subject, therefore, is to be welcomed.

The work of Meyer is now well known, and both its merits and demerits have been publicly recognized. Very far inferior to the work of Benedikt in strength and suggestiveness, it is perhaps better adapted to meet the general want. It gives a fair and truthful résumé of the state of medical and surgical electricity, so far as we know, in Europe, at the time of publication. It is now of necessity considerably behind the times, though much in advance of Reynolds. Meyer is utterly free from hobbies, and evidently has no prejudices. His style, however, is more German than English; his directions are oftentimes obscure, and in generalizing power he is greatly deficient. His want of diagnostic skill impairs seriously the value of some of the cases reported. Case 84, reported on page 396, as a case of locomotor ataxia, is really not locomotor ataxia at all. The pathological condition was probably a local and tempo-

rary congestion of the cord—a condition which, when neglected, may in perhaps one case out of a hundred or thousand, go on to be sclerosis of the posterior columns.

We speak particularly of this case, because it will mislead those who are trying to cure locomotor ataxia by electricity. After the process of degeneration of the cord has really set in, galvanization very rarely cures, though it may relieve.

The editor has in this edition corrected several of the typographical errors of the first edition, and has called attention to the very excellent apparatus of the Galvano-Faradic Mfg. Co.

In closing these brief notices, we may remark that no one who wants to keep abreast of the times in electro-therapeutics should depend on text-books, even the best and most recent. The medical journals first herald the glad tidings of electro-therapeutic experiment and discovery, and one of the German year-books has a separate department devoted to electro-therapeutics, in which every article on the subject of any importance, published in any language, receives proper credit.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 14, 1872.

Dr. A. L. Loomis, President, in the Chair.

ANOMALOUS MALFORMATION OF THE HEART.

Dr. Mary C. Putnam presented a case of congenital malformation of the heart, taken from a child who died among the patients of the out-practice of the N. Y. Infirmary.

The child was born at term, of perfectly healthy parents, and for a week appeared to be quite vigorous, it having never presented the slightest trace of cyanosis. No examination had ever been made of the præcordium for heart-murmurs, as no cardiac symptom had been presented, when, on the eighth day after birth, the child seemed attacked with violent pain in the chest, and screamed for several hours. It then fell into a semi-comatose condition, which gradually deepened until death. This supervened about twelve hours from the commencement of the attack. It was seen by no physician during this short illness.

At the autopsy, the immediate cause of death was found in an extensive congestion of the lungs, which occupied them entirely, with the exception of a small point at each apex. The lungs floated in water.

The brain presented the congestion characteristic of asphyxia, and the same deep-blue congestion was noticeable in the coronary veins of the heart. The original lesion existed in this organ. Externally it was rounded and quadrangular, resembling the turtle's heart—a resemblance that has often been noticed in cases where a communication existed between the two ventricles. No such communication was present, however, in this case. The left ventricle was immensely hypertrophied and dilated, constituting the body of the heart.

Contrary to expectation, as based upon the turgid condition of the coronary veins, this ventricle contained hardly any blood. The mitral valve was normal; the aorta opened into the ventricle as usual, and its orifice was also normal.

The septum between the two ventricles—that in the large majority of cases of malformation is deviated to the left—was deviated to the right, and was indicated on the external surface by a broad fibrous line sloping obliquely from the base of the heart to the right side, and cutting off a small segment at the upper right angle. This segment represented the right ventricle, whose cavity had been almost entirely obliterated by concentric hypertrophy of its walls, which seemed to form part of the septum ventriculorum. A shallow depression just below the tricuspid valve was all that remained of the cavity. The tricuspid valve was very imperfect, constituted by a single membrane, supported at each extremity by a group of rudimentary cordal tendinæ.

The pulmonary artery was placed immediately upon the septum. It had, therefore, no communication with either ventricle, but terminated in a cul-de-sac closed by muscular fibre. At the extremity of this cul-de-sac might be discerned two rudimentary fossæ that indicated the place of two sigmoid valves, but no trace of the valves themselves existed.

Above this point the pulmonary artery was permeable throughout, although its diameter was about a third less than that of the aorta. The ductus arteriosus was quite permeable.

The auricles were both large. The foramen ovale was open, but the valve well developed. The Eustachian valve persisted, and it was evident that the blood from the inferior cava had never passed into the right ventricle, but had always been thrown immediately into the left auricle. The potency of the foramen ovale and of the ductus arteriosus sufficiently explained the circulation. All the blood passed into the left ventricle and thence into the aorta, and, by means of the ductus, the necessary supply was sent to the lungs, not only for their nutrition, but, during life, for the function of respiration. The heart, therefore, was really composed of only three cavities, a ventricle and two auricles, and this is one of the rarest forms of cardiac monstrosity. The obliteration of the pulmonary aorta which also existed was only an epiphenomenon of the general lesion. Stricture of the pulmonary orifice is the most common of all kinds of fœtal lesions; this orifice being affected in 99 out of 153 cases given by Peacock. As is well known, Rokitansky first called attention to the frequency of lesions of the pulmonary artery in fœtal life, as compared with the almost equal exclusiveness of aortic disease after the establishment of extra-uterine circulation. The explanation given by Peacock of this fact is very plausible, that during fœtal life the pulmonary orifice sustains the shock of all the inequalities of pressure in the circulation of the placenta and of the umbilical arteries. He suggests that such variations of pressure may themselves account for the localized endocarditis and endoarteritis which Rokitansky pointed out, and upon which Meyer (*Archiv der Virch.* 1857) has particularly insisted.

In cases of pulmonary stricture from such cause, the right ventricle is hypertrophied. If, as is generally the case, the lesion occurs before the closure of the septum—that is, before the end of the second month—an orifice of communication remains between the two ventricles, as the blood is forced through this opening more easily than into the artery. But in such cases also the septum is deviated to the left, the aorta to the right, and arises from the right ventricle, or from both, owing to the potency of the septum. Heine considers this deviation of the septum as the primitive lesion. To it is due the origin of the aorta from the right ventricle, whence, he says, the blood finds such great facility of escape from the ventricle, that less passes by the pulmonary artery. This, therefore, partially atrophies from defective function.

Atresia of the pulmonary orifice presents quite dif-

ferent concomitant conditions from stricture. The septum is or is not deviated; the aorta, even by Heine's admission, does not arise from the right ventricle, and this latter is atrophied instead of being dilated and hypertrophied. These cases of atresia of the orifice are extremely rare. Peacock only quotes twelve, and of cases of atresia unaccompanied by obliteration of the stem of the aorta I only find four recorded. The heart under examination presents precisely an example of this rare anomaly.

The moment at which the deviation from normal development took place may be fixed at somewhere after the beginning of the third month, for the septum ventriculorum is closed, and before the beginning of the fifth, for the Eustachian valve persists. It is, indeed, so complete, that it seems preserved in the state of its perfection, at about the beginning of the fourth month—the probable period, therefore, at which the lesion in question occurred.

The *nature* of that lesion was a matter of great interest. There was certainly no trace of endocarditis, and the hypertrophied muscular tissue that filled up the right ventricle did not present any obvious traces of myocarditis, such has been insisted upon by Stolker as a cause of pulmonary stenosis.

Dr. Putnam was inclined to ascribe the hypertrophy to the existence of some obstacle at the pulmonary orifice, that had necessitated great effort on the part of the right ventricle at the very moment that the formation of the septum was in progress. A double impulse, therefore, was given to the growth of muscular tissue, and under its influence this became excessive, blocked up the pulmonary orifice, and then, when the cavity of the ventricle became useless, gradually obliterated it as well.

The pulmonary congestion that immediately caused death evidently resulted from an overloading of the left auricle, charged with blood both from the right auricle and from the pulmonary veins. The slightest failure of power of the dilated left ventricle would tell fatally upon such a morbid condition. The left ventricle was obliged both to send blood to the lungs, by the aorta, and receive it from them by the usual channels. The circle of circulation was too small, and finally became blocked at both ends. Then the heart staggered and succumbed.

The absence of cyanosis in this case, inexplicable on the theory that cyanosis depends on a mixture of venous and arterial blood, is easy to understand by those who ascribe the blue coloration to a stasis of blood in the venous capillaries, and to its insufficient aeration by the lungs. Such stasis had not had time to take place during the short life of the child, and the moment that aeration began to be insufficient coincided with the invasion of the fatal pulmonary congestion.

Dr. Jacobi inquired if the bronchial arteries had been examined.

Dr. Putnam regretted that such examination had been forgotten until it was too late, but observed that the sufficiency of the ductus arteriosus rendered the dilatation of the bronchial arteries unnecessary, and therefore improbable.

Dr. Jacobi, on examining the heart, observed that it was indeed a very rare case of anomalous formation. He did not believe in explaining such anomalies by the vague term "arrest of development," for that explained nothing. The real question was, *why* had such an arrest occurred? In the present case it was noticeable that the pulmonary artery was riding over the septum, and arrested in its progress towards the right, while the aorta was equally arrested in its march towards the left. He was inclined to attribute the excessive development of muscular fibre, which had thickened the septum, closed the pulmonary artery, and obliterated the right ventricle, to a myocarditis. He suggested that a microscopic examination, that should reveal an excess of connective tissue relatively to the muscular fibres in the neighborhood of the pulmonary orifice, would render this origin almost certain.

Dr. Putnam had intended making such examination for the purpose of settling this very question, but had reserved it until after presentation of the specimen.

MAMMARY TUMOR (FIBRO-SACROMATOUS.)

Dr. Post presented a tumor removed by operation from the left mammary region of a lady aged 55. The mass was as large as an ordinary mammary gland, being the size of the two fists. The patient was not conscious of the existence of the tumor until November last. It had not been the seat of any pain, the general health continued good, and the integument moved freely over the growth. There was no attachment to the pectoral muscle underneath. The general shape of the tumor, as covered by the integument, was very nearly spherical; and there were some inequalities of the surface that suggested the idea that it might be a cystic growth. There were no enlarged glands in the neighborhood, nor evidence of constitutional contamination. It seemed to be identified with the mammary gland, although it was separated at its upper portion. Dr. Post consequently removed the whole of the gland with the tumor. He was, however, struck in its removal with the fact that the tumor was remarkably loose in its attachments to the surrounding parts, and that there were no vessels of any considerable size that were divided in the operation. Only five vessels required to be secured, and the operation was done by acupressure. On examining the tumor after closing the wound he was surprised to find that there was no intimate connection between the tumor and the mammary gland. The gland was atrophied, and all attachments to it were very readily overcome by the handle of the scalpel.

The tumor was of hard consistence, and it creaked under the knife more than scirrhus. There were no cavities in its substance containing fluid, in fact there was nothing like cancer-juice to be detected. The subcutaneous veins were considerably enlarged. The tumor had not yet been examined microscopically.

He presented the following report from Dr. Delafield of the microscopical appearances of the tumor:—

The tumor consists of a firm, dense tissue, divided up in all directions by clefts and fissures. The solid portion consists of connective-tissue fibres, mixed with large numbers of oval and fusiform cells. At the edges of the clefts the tissue is not uniform, but is divided up into large tufts. The clefts are lined with cylindrical epithelium. The tumor belongs to a class which has been described under different names by different authors.—proliferous mammary cysts, cysto-sarcoma, etc. The explanation most generally received at present is that there is an intra-canalicular growth of papillary tumors from the walls of the milk-ducts, at the same time the milk-ducts are dilated. From this dilatation, and the filling up of the dilated ducts with the solid new growth, result the peculiar appearances seen in this specimen.

The tumor is, technically speaking, a fibro-sarcoma inter-canaliculare mammæ.

The acupressure needles were removed forty-eight hours after the operation, and there was a prospect of the wound healing almost entirely by first intention.

DEATH FROM HEART-DISEASE.

Dr. Finnell exhibited a heart taken from a colored

woman aged fifty, who died suddenly while in the act of taking a cup of coffee at the breakfast table. The aorta was the only organ that showed any lesion, which was an extensive calcification just above the aortic valves.

He also exhibited a heart taken from the body of a man aged 35. He was returning home on Saturday evening when he met a prostitute who persuaded him to accompany her to her lodgings. After retiring to her room, and fifteen minutes after having had connection, he was seized with a fainting spell, and before aid could be summoned he was dead. The heart weighed twenty-four ounces, and there was atheroma of the aorta, with marked hypertrophy of the left ventricle. The brain was not examined in this case.

Dr. Loomis was of the opinion that very few of the large number of sudden deaths occurred from heart-disease, although the heart was found to be diseased at the time. This statement was founded on a careful investigation of 155 typical cases of heart-disease.

Dr. Post remarked that sudden death might be often caused by a minute lesion of the medulla oblongata, which lesion might be very readily overlooked during an autopsy.

Dr. J. C. Peters in this connection referred to the case of a patient of his, in whom the only cause for sudden death was fatty degeneration of the heart.

Dr. Loomis stated that, about a year and a half since, he examined a gentleman, eleven o'clock in the morning, and gave the opinion that the heart was perfectly sound. The patient was in apparently good health at the time. At one o'clock in the same afternoon he died suddenly. A few days before, this patient had had his life insured for twenty-five thousand dollars, and a gentleman who was called in after the death had occurred offered the opinion that there had been heart-disease. After considerable effort Dr. Loomis obtained an autopsy, and succeeded in satisfying himself that death was due to a large effusion of blood at the base of the brain. There was a slight atheromatous condition of the aorta, and the left ventricle was very slightly hypertrophied, but these lesions were insignificant.

Dr. Putnam suggested that a broad distinction should be made between aortic and mitral disease in regard to the liability of sudden death. Recent statistics had shown that aortic insufficiency was particularly liable to be followed by sudden death, and an ingenious explanation had been given of its mechanism. When the aortic valves are sufficient, the blood, suddenly arrested by their closure, is forced into the coronary arteries that arise behind them. When they are insufficient, a large part of the blood passes back into the ventricle, and does not pass into the coronaries. At all events, the jet is not thrown with the normal force. The walls of the ventricle, therefore, are constantly growing weaker from insufficient nutrition, while the cavity is dilating from the increase of its contents, and the brain suffers from the general anæmia so characteristic of aortic insufficiency. At a given moment, the combination of these influences reaches some special crisis, the heart staggers under an excessive afflux of blood, at the very time that it is deprived of its normal stimulus from nervous influx, and from the blood freshly circulating in its nutritive arteries, with an increased burden and less power to bear it, the heart comes to a stand-still, and pauses in diastole.

Dr. Jacobi maintained that it was hard to prove or to disprove this theory, except by the facts of clinical experience. If the idea were tenable that the heart will give out suddenly when not sufficiently nourished, it was impossible to see why a large number of persons, under severe physical exertion and under great mental emotion, should not die upon the spot. It appeared to him that inasmuch as a large portion of the heart could be disintegrated without causing immediate death, a sudden arrest of blood in the coronary could hardly be charged with producing a fatal result.

Dr. Loomis remarked that the clinical history of cases of aortic regurgitation militated against the theory of sudden death from arrest of supply through the coronary artery. Aortic regurgitation first causes a dilatation of the ventricle; that dilatation is immediately compensated by hypertrophy of the ventricular walls. The hypertrophy goes on *pari passu* with the dilatation until degenerative hypertrophy commences, when the dilatation gets the best of the race. Then it is that the patient is in a condition to invite sudden death, when the heart may be overtaxed.

Dr. Jacobi had never been able to convince himself that any of his cases of death from heart-disease occurred suddenly. He did not recollect having seen a case terminate in death in less than two hours. Such an one he called to mind in the person of a boy, who died in two hours and a half from pulmonary œdema.

Dr. Peugnet referred to the case of the late Dr. Cammann, who died of degenerative hypertrophy, caused by aortic and mitral disease.

PULMONARY APOPLEXY.

Dr. F. exhibited also a case of pulmonary apoplexy of the right lung, removed from the body of a German aged 65. He was engaged in a quarrel with one of his tenants in reference to chopping some wood. It was claimed that he was struck with an axe in the quarrel, and that he had died in consequence. At the autopsy, however, no marks of the axe were to be found. On removing the calvarium a large effusion of serum, amounting to eight or ten ounces, was discovered by Dr. Cushman underneath the arachnoid. If there was such a thing as serous apoplexy, Dr. F. was inclined to call this such a case. The brain was not congested, neither were its vessels gorged or distended. On opening the chest the right lung was discovered to be the seat of extensive pulmonary apoplexy. It was clear that death was caused by this latter effusion, combined, perhaps, with the serous apoplexy. The fatal result occurred about an hour after the fracas.

Dr. Jacobi asked if the convolutions were not hard and flattened, and on being answered in the affirmative, expressed the opinion that the supposed serous apoplexy was evidently an old process.

DEATH FROM PYÆMIA AFTER THE DIVULSION OF STRICTURE.

Dr. Keyes exhibited a specimen of death from pyæmia after the divulsion of stricture. A Scotchman, aged forty, was last month sent to hospital from the workhouse. He was a stout, heavily built man, and complained of stricture with cystitis. A number 11 bougie (French scale) was readily passed, and, as the patient desired to be relieved of his trouble, a Thompson's divulsor was introduced, and screwed up to 30. The patient did not complain of any pain, until a No. 25 sound was passed, when he also had a chill. A subcutaneous injection of morphia was made into one of his arms. Shortly after this he passed into a condition of fever, which lasted until death. The chill lasted five minutes. His pulse went up very rapidly, so that the next day it was 130–140. His skin was hot and dry from one end of the disease to the other. He drifted into a condition of delirium on the third day, and his skin became yellow twenty hours before he died.

It was discovered that there was a little tenderness

beneath the scrotum, and on the third day a lump about the size of a marble was discovered. The patient died on the ninth day.

At the autopsy it was discovered that there was extravasation of urine; that there had formed pus in the meshes of the scrotum; that there was a small abscess in the floor of the urethra, just in front of the stricture. There were also three abscesses in the prostate. The bladder was hypertrophied to a certain extent, and gave evidences of the existence of chronic cystitis. An abscess the size of a marble was found in the summit of the left lung; the liver and spleen were soft, but contained neither abscesses nor infarctions. There was no trouble with the kidneys. The cavities of the pleurae contained serous effusion, with a few floating flocculi.

The specimen was of interest as showing the results of divulsion, viz.: tearing through of the mucous membrane and of the stricture tissue, and also as a case terminating with pyæmia as the apparent result of the operation. About five days after the operation the patient was recognized by two others, who had seen him in a strait-jacket, with violent *mania à potu*, three days before his admission to the hospital. This fact explained the reason why the condition of the patient was such as to invite suppuration so readily. In fact, this condition was very manifest in the behavior of the hypodermic punctures, which degenerated into diffuse suppuration. The chill evidently did not have anything to do with the pyæmia as an initiative.

The heart was enlarged, the lungs œdematous, and the pericardium was adherent to the stomach.

EFFECTS OF HYPODERMIC INJECTION OF RESENOID OF VERATRUM ALBUM.

Dr. Peugnet presented the stomach, intestines, uterus, and bladder of a slut, which were intensely injected; the coats of the stomach and intestines thickened, and he believed presented evidences of inflammatory action. The specimen was unique, and the only recorded one having been produced by the hypodermic injection of $\frac{2}{3}$ gr. of the resinoid of veratrum album, that is, its resin deprived of its alkaloids, veratroida (so-called veratria) and jervina. It contains a distinct organic principle, but not of basic origin. He had made several experiments on various species of animals, but had invariably obtained similar results, varying in intensity as to the amount of resinoid administered, and to the length of time it took to cause a fatal termination; whilst he had never seen any similar effect produced either by the veratroida or the jervina, although various observers had attributed this peculiar action of veratrum album to its veratroida. He considered that in this principle resided the marked difference between veratrum album and viride. The kidneys and ureters were normal, the liver dark and congested, the heart distended, ventricles filled with blood; right lung congested, with ecchymotic spots on its surface, but readily inflated. Its peculiar effect on the uterus showed that the cases of hemorrhage alluded to by Orfila, in his treatise on toxicology, as well as the case which had come under his own observation, was not due to its mechanical action as a sternutatory when applied to the nostrils, but to the congestion developed in the uterus.

It is a cardiac poison, causing death by stopping the heart's action at the diastole, owing to a gradual destruction of the excitability and conductive power of the nerves of the organism, probably due to a paralysis of the blood-vessels of the nerve-centres.

Dr. J. C. Peters alluded to the specific action of certain medicinal agents on the alimentary canal, and inquired if there had been any diminution of the temperature in this case.

Dr. Peugnet replied affirmatively.

Dr. Peters thought that it was intense hyperæmia or congestion, due to a paralysis of the vasa-motor nerves.

Dr. Peugnet admitted that the hyperæmia or congestion, as suggested by Schroff and confirmed by Gilder, in reference to veratrum, would be accounted for by paralysis of the vasa-motor nerves as its primary action, but that if the animal lived long enough, gastro-enteritis would be developed as a secondary one, as observed by him in a case of poisoning, where the patient took half an ounce of the homœopathic mother tincture of veratrum album, and was confined to her bed for eight weeks, presenting all the symptoms of gastro-enteritis, finally recovering with a contraction of the colon, which caused an extreme attenuation of the fæces, and that they only recovered their natural form and size four months after.

Dr. Jacobi remarked that Dr. Peugnet had been carrying on extensive experiments with the different varieties of veratrum, and suggested that he should make a microscopic examination of the specimens.

The Society then went into Executive Session.

Stated Meeting, February 28, 1872.

Dr. A. L. Loomis, President, in the Chair.

FOLLICULAR ULCERATION OF PREPUCE.

Dr. Post presented the inner portion of the lining membrane of the prepuce removed by excision from a married man aged forty-eight. The patient had a long foreskin, which could be retracted only with difficulty. The disease consisted in an extensive granulating ulceration, and also induration. It presented none of the physical characters of the initial sore of syphilis, neither was there any syphilitic history connected with the patient. None of the glands in the neighborhood were enlarged. The ulcer was indolent in character, had existed for a period of three months, and seemed, in the absence of any other cause, to be due to a want of cleanliness. The specimen was, on motion, referred to the Committee on Microscopy.

PERFORATION OF APPENDIX VERMIFORMIS BY FÆCAL CONCRETIONS.

Dr. Mason exhibited some fæcal concretions removed from the appendix vermiformis of a stout, healthy boy aged eleven years. The patient was taken sick on Wednesday, December 7, with what appeared to be a simple attack of cholera morbus. In the morning his mother gave him a dose of oil, which produced four or five large evacuations. Dr. Mason was called to the patient on the afternoon of Thursday. There was then a good deal of pain in the abdomen, most intense, however, in the neighborhood of the right iliac region. The nature of the case was at once suspected and an opinion given accordingly. The patient was put under the opium treatment, and was seen again at ten P.M. The pain was somewhat easier, although it had extended to the left side, where there was also some swelling. There was then decided tympanitis over the whole abdomen. The opium treatment was continued, when on Friday night the pain became more intense. Six leeches were applied to the part, with some benefit. The tympanitis increased very much, and the pain seemed to be more on the left side than on the right.

The temperature had been 103° F.; pulse 130, and

respiration correspondingly rapid. On Friday these symptoms improved, the temperature fell to 98, but the tympanitis was still very considerable. In fact, he appeared to be so comfortable that hope was entertained that there had been a mistake in the diagnosis, and that the peritonitis was due to other causes than perforation of the appendix vermiformis. On Friday night and Saturday morning, however, all the symptoms became suddenly worse; there was intense pain in the region of the diaphragm, and the pain in the left side also became more considerable. On the Sunday following, he being no better, Dr. Flint was called in consultation, and, despite a very careful examination, no tumor could be detected. The case was then regarded as one of general peritonitis, due to other causes than those which referred to the appendix. He gradually grew worse, and sank on Monday morning. He died just seven days after he was first taken sick. During the last twelve hours of his life opium seemed to have no effect in allaying pain, notwithstanding over a hundred drops of the tincture were taken in three hours. In addition to this, a grain and a half of morphia was injected subcutaneously, but with no marked effect. As a last resort, chloroform was administered continuously during the last six or eight hours of life.

Autopsy.—On opening the abdominal cavity, there was not that escape of gas which we usually notice in perforations of the appendix, but intense peritonitis was very evident. The ascending colon was bound down by a false membrane which surrounded the whole of it; and directly behind the colon, commencing a little above the crest of the ilium, was a large abscess, which extended along the under surface of the diaphragm. It was covered by a thick layer of lymph, and so were the upper and under surfaces of the liver. The intestines on the left side were also bound together by a large collection of lymph. The appendix was unusually long, measuring about five inches; and there were two perforations in it, the upper one about an inch and a half from the commencement, and the second about half an inch below the first. Projecting through the first opening was a concretion about the size and appearance of a date-seed. The extremity of the appendix was in a gangrenous condition. During all his sickness there was no trouble in evacuating the bladder.

The concretion was nothing more than hardened fecal matter arranged in concentric layers. There were eight of these rings, and in the centre of the mass was a white substance which resembled lime.

There was no swelling on the right side, that might have led to the suspicion that there was an abscess in that situation. Even if there had been a certainty that an abscess did exist, there would have been no chance of reaching it by an operation, the collection of pus being much higher than usual in these cases.

The tympanitis was so extensive that the practicability of puncturing the transverse colon was seriously entertained. In conclusion, Dr. Mason remarked that Dr. Parker advised, before operating in these cases, to wait until the fourth or fifth day, but in the present instance the peritonitis commenced from the start.

New York City Lunatic Asylum.—Dr. R. L. Parsons, Resident Physician of this Institution, in his annual report for 1871, states that 780 patients were admitted during the year 1870. 453 were discharged. 132 died. Of those discharged, 212 recovered; 129 improved; 112 showed no improvement. The importance of greater care on the part of physicians who sign certificates of insanity is forcibly dwelt upon by this writer.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 7, 1871.

Dr. E. R. Peaslee, President, in the Chair.

(*Discussion on Dr. Loring's paper, vide page 97*)

Dr. Noyes.—I agree with the statements made by Dr. Loring in the rules for performing the operation for strabismus. The certainty which can be secured in the cosmetic effect by attention to these rules is in strong contrast with the variable and sometimes deplorable results which followed the operation in its beginning. Yet even now a slight divergence will sometimes ensue after operating for convergence. This is doubtless due to the extent of incision made in the capsule of Tenon, and what Dr. Loring said about the variable strength of this tissue is to be remembered in making the subconjunctival incision. I have not been favorably impressed by the so-called subconjunctival method of operating, but choose rather a small opening over the insertion of the muscle and close it up by a fine suture. In only some rare cases have I employed the suture through the outer canthus, which Dr. Knapp first suggested; I have found it answers the indications. I have not been in favor of operating upon very young subjects. My reason is that, at a very early age, it is impossible to use those optical appliances which are indispensable to many cases of strabismus. The problem is both optical and mechanical, and I do not find any certainty in the results unless the optical conditions are fulfilled. Hence for a young child in whom the convergent strabismus has not become decided, I prefer to postpone the operation until 6 or 8 years of age, and, to avoid impairment of sight by disuse of one eye, direct the parents to cover the eye, which is habitually used so that the child may be compelled to keep up the practice of using the other. In one class of cases, I am strongly in favor of not operating at an early age, viz. where strabismus, as is not infrequent, comes from opacity of the cornea. This kind of strabismus is extremely apt to disappear or to greatly diminish as a child grows. Probably because, as the opacity fades away and vision improves, the effort to see makes less demand on the accommodation, and consequently less on the interni. For such cases there is hope of a spontaneous cure, and danger that an early operation may at length bring about divergence of the eye.

I have seen a statement by some one that he had obtained binocular vision in from 60 to 80 per cent. of cases operated on. If by this is meant that true binocular vision, as distinguished from apparently correct position of both eyes, was secured, I am at a loss to credit the statement. It is perfectly true that in this proportion of cases the eyes may, so far as their motion and look is concerned, act like a normal pair, and the person be supposed to have binocular vision. But in very many such cases, I have been wholly unable to get evidence that there was true binocular vision. Tests for double images and by the stereoscope and by other means would show that one eye only was employed in seeing, and the other followed after in a merely mechanical way. I do not believe that true binocular vision, the conscious participation of both eyes, is secured in more than 25 to 35 per cent. of the cases. The cosmetic results, however, which are what the public demand, are far superior to this; but the aim of the surgeon is to restore the physiological unity of the two eyes if possible. This subject, however, is a very large one, and on this branch of it Dr. Loring has not touched. For strabismus as a purely surgical proceeding, he has certainly stated the appropriate rules of treatment.

Dr. Roosa would like to ask Dr. Loring in regard to a point made in the beginning of his paper as to the causation of squint. He understood Dr. Loring to say that he disagreed with Donder's statement, that there were scarcely any cases of convergent squint that were not caused by a shortened condition of the eyeball (hypermetropia); and to state, that there were many that were dependent upon straining of the accommodation and weakness of the externi. While the speaker understood and accepted this view, he wished to know if Dr. Loring meant to teach, also, that the habit of imitation, *i. e.*, a child imitating one who squinted, would of itself *cause* strabismus.

Dr. Roosa also asked if Dr. Loring made a literal quotation from Stellwag in regard to the time for operation. He had been under an impression, probably erroneous, that Stellwag recommended the period at which children began to use their eyes upon near objects as the proper one for operation.

In regard to the first question, Dr. Loring said that Dr. Roosa must have misunderstood him, as he had not alluded to the fact that strabismus could be caused by imitation. What he intended to say was that oftentimes a condition was produced in emmetropic eyes by debilitating diseases which gave rise to factors which were precisely similar to those which existed in hypermetropic eyes from congenital malformation. Thus some temporary reduction in the power of the ciliary muscle would force emmetropic eyes to use an increased amount of accommodative effort with moderate degrees of convergence, which is the essential cause of squint.

In regard to the passage in Stellwag, Dr. Loring remarked that he had copied it from the last edition of the American Translation.

Dr. Knapp remarked that the *subconjunctival tenotomy* was neither difficult nor uncertain, but had the advantage of causing less extensive wounds, smaller effects, and less tendency to sinking of the caruncle and protrusion of the eyeball. If, on examination after the operation, the effect was found to be too small, it was easier and surer to increase it to the desired extent by dividing the conjunctival bridge over the previous insertion of the tendon than to reduce, by means of sutures, too great effects which followed not infrequently the ordinary tenotomy, as advocated by Dr. Loring.

Dr. Knapp described the mode in which the subconjunctival tenotomy should be performed, stating that a neat operation required only four or five strokes with the scissors, two for the division of the conjunctiva and Tenon's capsule, and two or three for the division of the tendon.

With regard to the *application of sutures to increase or diminish the effect*, he said that Graefe's plan, of passing sutures only through the conjunctiva, mostly gave insufficient effects, at any rate the obtainable results could not be calculated with any degree of certainty. Oblique sutures, if they had any effect upon the tendon, were liable to change its physiological direction, causing secondary deviation of the globe, and should therefore be avoided.

The operation for squint was mainly a *mechanical* problem. In the development of internal squint there was always a struggle between forced convergence and forced accommodation, or between stereoscopic and acute vision. Which of the two got the ascendency, seemed to be more or less accidental. A weakness of the external recti, which Dr. Loring alleged, could not be regarded as a predisposing cause of convergent strabismus, as one of the essential features of concomitant squint was the maintenance of power both of the inner and outer recti, shown by the fact that the abductive and adductive excursions of the squinting eye were equal to those of the fixing eye.

Concerning the possibility of *determining the effect of an ocular tenotomy*, Dr. Knapp thought, with Von Graefe, that this could be done by a careful operator, with an approximation sufficient to promise a success in all cases except, perhaps, two or three per cent., which also might still be corrected by a subsequent advancement. The effect of each operation had to be examined and modified, if necessary, one or several hours after the tenotomy. There was no need of waiting eight or twelve hours for making these examinations and corrections, and if Von Graefe recommended so long an interval, his practice was strangely at variance with his teaching. He hardly ever performed an operation before three or four o'clock in the afternoon; and it would have been rather inconvenient to make the corrections eight or twelve hours later.

In regard to the *re-establishment of stereoscopic vision*, by the operation for squint, Dr. Knapp confessed himself to be the author of the statement Dr. Noyes had alluded to, though he did not now remember the percentage of cases in which stereoscopic vision was obtained. He had, eight or nine years ago, compiled a larger number of successive squint-operations made by him, and, if his memory served him, about 66 per cent. or 75 per cent. of them were followed by binocular fixation in all available parts of the visual field. Graefe, who had published statistics less favorable, had later declared himself in agreement with Dr. Knapp's results, since he had operated on children more frequently than he used to do before.

Dr. Knapp was of opinion that *strabismus should be operated on as soon as it was manifest.* Postponing the operation, very rare cases of spontaneous recovery excepted, could only place the patient into less favorable conditions as to the preservation of good sight in the squinting eye, and the restoration of binocular vision, which was the less apt to take place the longer strabismus was allowed to exist. He had repeatedly and always successfully operated for congenital squint on children, three or four months old. The operation, in the first years of life, was rather difficult, and threw a great responsibility on the operator, as he had less factors at his command to calculate the desired effect, but the innate tendency to binocular fixation then was still in great force, and commonly compensated small inaccuracies of the operation. As a rule, less extensive tenotomies should be made in children, and even in subconjunctival operations limiting sutures were often necessary. In no case, whether of an adult or child, the mobility of the operated eye should be reduced beyond the natural limit. This was the mechanical and most important side of the operation for strabismus. In convergent squint, experience had taught him that the effect of a tenotomy was excessive, if, one or two hours after the operation, the inner margin of the cornea could not be moved as far as to the caruncle. The success of squint operations, in his opinion, depended more on the close observance of these mechanical laws, than on most of the other factors that entered into the problem.

Dr. R. H. Derby.—I cannot agree with Dr. Knapp at all in his estimate of the value of Von Graefe's suture. In excessive degrees of convergent squint we can accomplish by this suture any possible desired correction. A methodical increase of the effect of the operation of any degree may by this means be secured. Von Graefe found this suture of so much value that he latterly almost never practised the operation of sewing forward the muscle. The danger that Dr. Knapp alludes to of the obliquity of the suture causing a ver-

tical deviation of the optical axis is, if the suture be properly applied, rather imaginary than real. According to the breadth of the transfixed bridge of conjunctiva the eye rolls more or less toward the median line. If the amount of convergence was excessive, more than 3–4 lines, I have been in the habit of contenting myself with a partial correction of the squint and ultimately making a compensatory operation on the fellow-eye. During the period of my assistantship at Von Graefe's clinique I had almost daily opportunity of seeing the value of this suture to increase the effect of a tenotomy, and I have never known it to reduce a vertical squint.

Von Graefe has long since pointed out the importance of making the conjunctival wound very small in the operation of tenotomy. Sinking of the caruncle is by this precaution reduced to a minimum. After an operation for convergent squint there should remain two or three weeks after the operation a convergence of three-quarters to five-quarters of a line. This is not merely for the sake of cosmetic effect (that is on account of the apparent divergent squint of hypermetropic eyes), but because after this period there is always a gradual increase in the effect of the operation.

Especially important is it, after a squint operation, to ascertain, by means of a prism with its base downwards, the dynamical relations of the lateral muscles; for often after a tenotomy for convergent squint there is a tendency to divergence. Should we now find a preponderance of muscular action in favor of the external recti we must see that enough accommodative effort is called into play to counteract the tendency to divergence.

Of the amblyopia that is found in monolateral squint three stages or rather forms have been distinguished. In the *first* form the acuity of vision is diminished—there is simple dulness of the retina. In the *second* form the power of fixation is impaired; the patient makes a feeling movement with the macula lutea, and he sees objects better that lie toward the temple than those that lie toward the nose.* In the *third* form the inner half of the retina has better vision than the macula. This classification is of great importance for the prognosis. The dulness of the retina described under the *first* form is entirely curable and often disappears immediately after the tenotomy. In the *second* form the improvement comes, but is only partial and gradual. For the *third* form the chances of improvement are very small.

Dr. T. R. Pooley concurred with Dr. Knapp in thinking the subconjunctival the best method of operating. It was not difficult of execution, provided the conjunctiva was grasped close to the sclerotic, so as to insure the opening of Tenon's capsule. The method of operating proposed by Dr. Loring, of introducing the hook from above, and exposing the whole insertion of the muscle, and the too free dissection of the capsule, is likely to be followed by undue reaction. The vertical suture could have no diminishing effect. A suture designed to diminish the effect of the tenotomy should be passed horizontally in a place with the muscle and deeply enough to embrace part of the tendon in its grasp. He thought it advisable to operate without an anæsthetic whenever practicable, in order to control the effects as soon after the operation as possible.

The Endoscope.—Dr. Robert Newman, of New York (*Trans. Med. Soc., N. Y.*, 1870), gives a practical paper on the use of the endoscope in the treatment of diseases of the female bladder and urethra. It is profusely illustrated with diagrams. Six cases, selected from many others treated at the Woman's State Hospital, under the care of Dr. T. A. Emmet, are detailed.

Correspondence.

THE SELLING OF DIPLOMAS.

To the Editor of the Medical Record.

Sir: Duty to myself, not favor to persons or colleges, —for I never knowingly do favors where crime may possibly be abetted thereby—renders it requisite to say, that on further investigation, I find that there is no evidence within my reach, which will justify the following paragraph of my letter published in the Record of the 15th March inst. as regards the College alluded to.

"Besides such outrageous acts, it is credibly stated that this same college advocates the propriety, and follows the practice, of selling their diplomas to persons living in distant parts of the State, on the simple statement of the person seeking it, without any presentation of certificate or credentials."

I had either misapprehended the statements alluded to, or they incorrectly represented the only written evidence I have yet seen upon this matter of the practice of the said college, of giving diplomas without examination.

So far as the evidence before me goes, the college offers to examine any graduate of a medical college, and, if satisfactory, to give him a diploma for $35.

It also offers to receive the diploma by mail, or indeed any certificate of graduation, and, excusing the examination, issue a diploma for $175, that is, charging $140 more when they do not examine, than when they do examine.

Respectfully,

Stephen Rogers.

March 30th, 1872.

New Instruments.

DESCRIPTION OF A NEW SCARIFICATOR TO FACILITATE VACCINATION.

By B. F. DAWSON, M.D.,

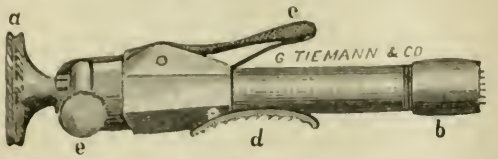
Attending Physician to the New York State Women's Hospital, etc.

The threatened epidemic of small-pox during the past winter greatly increased the vaccinating duties of physicians. In the frequent performance of the operation, in common with many others, I felt the necessity of a scarificator which would combine the three great requisites of painlessness, rapidity of action, and simplicity of mechanism. While thinking over the matter, the following instrument suggested itself, and through the assistance of Mr. Stohlman, of G. Tieman & Co., of this city, has been just put into form.

The accompanying illustration represents the *exact* size of the instrument, which admits of its being carried in the vest pocket.

The construction of this instrument is as follows: a simple tube through which runs a steel rod connecting with the handle (*a*), and terminating in six needle points shown in woodcut; a spiral spring encircles this rod, being fastened to it at the needle extremity and connecting with the outer tube at the insertion of the handle (*a*). A rachet catch (*e*) prevents the recoil of the spring when wound up, which is done by turning the handle (*a*) with the right hand, *from right to left*,

until it winds no further. The regulating piece (*b*) enables the desired exposure of the needles, which should project but slightly beyond the end of the instrument. The instrument, being wound up, is ready for use. The



operation is performed by taking the scarificator in the right hand, the thumb being against the rest (*d*), and the second finger lightly resting on the spring lever (*c*); the first finger lies over the instrument, and thus completely conceals it, which is a great advantage in operating on children. Pressing the end of the instrument against the arm, the second finger is instantly pressed against the lever beneath it, by which act the spring is liberated and the needles instantaneously revolve and produce three perfect circular scarifications. By unscrewing the regulator (*b*), the needles can readily be cleaned by wiping or passing through a piece of soft paper.

Several of my friends and others have used the instrument, and to all it has given the most perfect satisfaction.

When carrying it in the pocket, the needles can be well protected by the regulator (*b*).

Obituary.

PROF. SAMUEL JACKSON, M.D.,

OF PHILADELPHIA.

Dr. Samuel Jackson, Emeritus Professor of the Institute of Medicine in the University of Pennsylvania, died, April 6, at his residence, in this city, at the ripe old age of eighty-two. He was born in Philadelphia on the 22d of March, 1787. He devoted his time with great energy to the study of his profession, and was successful in acquiring a high standing in its practice. In 1835 he was elected professor of the Institute of Medicine in the University of Pennsylvania, a position which was filled by him during a period of twenty-eight years, with great credit both to himself and the institution. He was one of the clearest lecturers and profoundest scholars, and occupied a front rank in the corps of professors of the university, a body of men which has long enjoyed the highest reputation for skill and learning throughout the world. In 1863, in consequence of his advanced age, he abandoned the active duties of his professorship, and has since held an Emeritus relation to the university. Prof. Jackson wrote several works on medical and physiological subjects, the most celebrated of which were a treatise on the "Principles of Medicine," first published in 1832, and an "Introduction to Lehman's Chemical Physiology," published in 1856.—*Philadelphia Inquirer.*

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from March 19, 1872, *to April* 4, 1872. *inclusive.*

Fryer, B. E., Surgeon.—By S. O. 43, Department of the Missouri, March 20, 1872, assigned to duty at Fort Union, N. M.

Storrow, S. A., Assistant Surgeon.—By S. O. 77, War Department, A. G. O., April 1, 1872, granted leave of absence for sixty days.

Brewer, J. W., Assistant Surgeon.—By S. O. 47, C. S., Department of the Missouri, assigned to duty at Fort Dodge, Kansas.

Tremaine, W. S., Assistant Surgeon.—By S. O. 47, Department of the Missouri, March 25, 1872, assigned to duty at Fort Larned, Kansas.

Monroe, F. Le B., Assistant Surgeon.—By S. O. 74, War Department, A. G. O., March 28, 1872, relieved from duty in Department of the Platte, to proceed to Boston, Mass., reporting on arrival by letter to the Surgeon General.

Lauderdale, Jno. V., Assistant Surgeon.—By S. O. 77, C. S., War Department, A. G. O., granted sixty days' extension of leave of absence.

Wilson, A. D., Assistant Surgeon.—By S. O. 42, Department of the Platte, March 21, 1872, granted leave of absence for 30 days, on Surgeon's Certificate of Disability.

Medical Items and News.

Prof. Samuel Henry Dickson, M.D., LL.D., died in Philadelphia, March 31, 1872. We shall give an obituary sketch of the life and services of the deceased in our next issue.

Dr. Samuel A. Billing, a prominent physician of Columbus, Georgia, died March 19, aged sixty-five.

Small-Pox seems to be on the increase in the city; the weekly average being one hundred cases, of which the average mortality is thirty-seven. In Philadelphia the epidemic is on the decline, although a weekly average of eighty deaths is reported. In Boston the epidemic is on the increase.

In the Report of Prof. Wunderlich, Director of the Charité Hospital at Leipsic, on the Small-Pox Epidemic in 1871, we find the following statistical statements: Small-Pox was widespread and very virulent. Remaining in hospital, at the end of 1870, were twenty-six patients; new cases during 1871, 1,654; whole number treated, 1,680; males, 1,108; females, 572. Remaining at the close of 1871, were thirteen patients, all of whom have since recovered, save one. Of 141 never vaccinated, 101 or 71 3-5 per cent. died; of 56 unsatisfactorily vaccinated, 30 or 53½ per cent. died; of 20 who had small-pox before, 5 or 25 per cent. died; of 1,463 vaccinated, but not revaccinated, 118 or 8 per cent. died. Ninety-five cases of suspected small-pox were received, in which the disease did not fully develop, all were vaccinated and recovered. The epidemic was at its height between March and June; the highest number of cases was reached on May 21st. Towards the close of June the cases rapidly diminished, and in September there were received but ten cases.

Vaccination.—Total vaccinations in New York, from January 1, to April 1, 1872, by Assistant Health Inspectors, was 112,181, by Police Surgeons' about 8,000 additional.

Cerebro-Spinal Meningitis is quite prevalent in this city and vicinity, and threatens to become epidemic. In another part of the Record we publish some cases by Dr. Packard, which, we doubt not, will be read with interest.

American Medical Association.—The Twenty-third Annual Session will be held in Horticultural Hall, Broad Street above Spruce, on Tuesday, May 7, 1872, at 11 A.M.

The following arrangements have been made with the different railroads:—

Union Pacific, return free, if first-class tickets are bought, and an acknowledgment taken from the agent; Cumberland Valley, excursion tickets; Orange, Alexandria, and Manassas, half fare for return; Pittsburg, Cincinnati, and St. Louis, excursion tickets; Pittsburg, Fort Wayne, and Chicago, excursion tickets; Cleveland and Pittsburg, excursion tickets; Central Railroad of Georgia, return free; Richmond and Petersburg, return free; Wilmington and Weldon, excursion tickets one fare; Wilmington, Columbia, and Augusta, excursion tickets one fare; Kansas Pacific, one and one-fifth fare for excursion; Atlanta and New Orleans Short Line (A. and W. Pt. Western, Mobile, and M. N. O., M. and Texas Railroads, return free; Western and Atlantic, excursion tickets one fare; Western Alabama, excursion tickets one fare; Evansville and Crawfordsville, excursion tickets; Lehigh Valley, excursion tickets one fare; Louisville and Nashville, excursion tickets; Memphis and Louisville, excursion tickets; North Pennsylvania, excursion tickets two-thirds fare; Pennsylvania Central, excursion tickets; Philadelphia and Erie, excursion tickets; Philadelphia, Wilmington, and Baltimore, excursion tickets; Philadelphia and Reading, excursion tickets at two-thirds; Baltimore and Ohio, excursion tickets; Lake Shore and Michigan Southern, excursion tickets, if forty are taken.

All who desire to avail themselves of the above rates must send to the Secretary, Dr. William B. Atkinson, 1,400 Pine street, Phila., their full names, and the names of *all* the railroads over which they must travel in coming to the session, with stamp for postage.

Camden and Amboy, excursion tickets at $4 from New York to Philadelphia and return, if fifty tickets are taken. For this ticket send money to Dr. A. E. M. Purdy, 123 East Thirty-eighth street, New York. From Montgomery, Ala., to Philadelphia, and return (by Tennessee), $39.80. Apply through Dr. R. F. Michel, Montgomery, Ala. From Washington to Philadelphia and return, $6, if fifty tickets are taken. Central Pacific, half local rates.

The Medical Register of New York.—The tenth volume of this important work, to be issued June 1st, 1872, under the auspices of the N. Y. Medico-Historical Society, will contain a likeness of Dr. George H. Tucker, deceased, editor of the first *Medical Register* published in this country; also a condensed description of the objects, character, and field of operation of the Hospitals, Infirmaries, Dispensaries, Asylums, and Medical and other Scientific Associations of New York City and its vicinity, and the Charitable Institutions of New York, New Jersey, and Connecticut, etc. It will, as usual, also contain information respecting the Colleges of these States, a List of Physicians in good standing, practising in New York City and adjoining places, their residences and office hours; also a List of County Medical Societies of New York, New Jersey, and Connecticut, their officers and members, with post-office addresses, and short obituaries, as far as can be obtained, of the physicians of these counties, recently deceased.

Committee of Publication.—Drs. Frederic Elliot, Ellsworth Eliot, Edward C. Woodbury, William T. White, *President*, and Alfred E. M. Purdy, *Editor*.

New York Academy of Medicine.—At the stated meeting, held March 21st, 1872, Dr. E. R. Peaslee, in the Chair, Dr. James L. Brown read an important paper on "Clinical Observations on Pelvic Peritonitis and Peri-uterine Cellulitis." Drs. Noeggerath, Barker, Thomas, and the President entered into the discussion of the paper. Dr. Brown's paper will be published in extenso in the *American Journal of Medical Sciences*.

At the stated meeting, held April 4th, 1872, Dr. E. R. Peaslee, in the Chair, an interesting and exhaustive paper, with cases, on "The Mechanism of Spontaneous Active Uterine Inversion, and the Reduction of a Case of Complete Inversion by the Combined Rectal and Vaginal Taxis," was read by Dr. Isaac E. Taylor. It was discussed by the President; W. C. Roberts, Vice-President, and the Author.

Dr. Henry Griswold was elected Resident Fellow.

The Secretary then read the names of the following gentlemen, who were elected by the Council, Delegates to the American Medical Association to be held May 7th, 1872, at Philadelphia, Pa.; Drs. Cornelius R. Agnew, James Anderson, James L. Banks, Gurdon Buck, James O. Pond, Alfred C. Post, Samuel S. Purple, Frederick A. Burrall, T. Matlock Cheeseman, John C. Draper, Thomas Addis Emmet, Austin Flint, Joel Foster, Elisha Harris, John H. Hinton, Edward H. Janes, E. Lee Jones, Ernst Krackowizer, Charles Carroll Lee, Stuyvesant F. Morris, Jeremiah C. Morton, Charles W. Packard, Edmund R. Peaslee, Gouverneur M. Smith, Bradford S. Thompson, and William T. White.

The President announced that he had invited Dr. J Parigot, formerly of Belgium and late of Brazil, a well-known expert in psychology and psychiatry, to read a paper, April 18th, 1872, on "The Influence of Philosophical Speculations on Medicine: its Practice and Medico-Legal Questions of Insanity." The views of Darwin, Huxley, Maudsley, and others of that school will be reviewed and combated.

A Valuable Medical Library for Sale.—The valuable library of the late Prof. George C. Blackman, M.D., of Cincinnati, containing upwards of three thousand volumes of medical works, besides many pamphlets, journals, and papers, is now in the hands of Mr. Robert Clarke, of Cincinnati, for public sale. We agree with the Editors of *American Practitioner*, that the library should be owned by some public institution or association, similar to the New York Medical Library and Journal Association.

The University of Louisville.—The degree of doctor in medicine was conferred on eighty-four graduates, at the Thirty-fifth Commencement of the Medical Department of the University of Louisville, held March 1st, 1872. The *ad eundem* degree was conferred on five practitioners Prof. R. O. Cowling, M.D., delivered the valedictory address of the Faculty.

Chicago Medical College.—The Commencement Exercise of the Chicago Medical College—Medical Department of the Northwestern University—was held March 12th, 1872. Diplomas were given to thirty-two graduates. Two received the *ad eundem* degree.

Jefferson Medical College, Phila.—The Annual Commencement of this College took place at the Academy of Music, March 16th, 1872. One hundred and thirteen graduates received diplomas, of whom fifty-four were from the State of Pennsylvania. Prof. Joseph Pancoast, M.D., delivered the valedictory address.

University of Nashville, Tenn.—The Twenty-second Annual Commencement of the Medical Department of the University of Nashville was held February 22d, 1872. Diplomas were awarded to eighty-four graduates.

Women's Medical College, Philadelphia, Pa.—At the Twentieth Annual Commencement of this Institution, held March 22d, 1872, thirteen ladies received the degree of Doctor in Medicine. Prof. Henry Hartshorne, M.D., delivered the closing address.

Minnesota State Medical Society.—The following officers were elected for the ensuing year: President, W. W. Mayo, M.D., Rochester, Minn.; Vice-President, W. L. Lincoln, M.D., Wabashun, Minn.; Corresponding Secretary, W. F. Hutchinson, M.D., Minneapolis, Minn.; Recording Secretary, C. E. Smith, M.D., St. Paul, Minn.; Treasurer, S. B. Sheardoun, M.D., Stockton, Minn.

Precocious Development.—Flügel describes in the *Bayr. ärtzl. Intell.-Blatt.* the case of a female child who died of diarrhœa at the age of five and a half years, having attained the height of five feet. The incisor teeth all appeared when she was six months old, and at nine months she had all the molars. At a year and a half of age she menstruated, and, especially in her later years, the periods were tolerably regular. The external genitals, excepting the absence of hair, were well-developed; the breasts were full, and the pelvis roomy. The condition of the internal genitalia was not ascertained. As regards her intellect, she did not appear to be in advance of other children of her age, although she had begun to speak when six months old.—*Br. Med. Journ.*

Deficiency of Lime and Phosphoric Acid in the Bones.—Dr. Weiske shows in experiments upon the goat, published in the *Zeitschrift für Biologie*, that the withdrawal of phosphates from the food proves injurious to that animal, and may, in fact, lead ultimately to its death; but that the bones do not appear to be rendered thereby more friable, or to undergo any change.

The Jefferson Medical College of Philadelphia has, during the period of its existence as an educational institution, graduated six thousand and fifty-four medical students.

Carbolic Acid Pills.—The following is a useful formula: ℞ Carbolic acid, 3 drops; Soap powder, 0.60 gram.; Lycopodium, 0.06 gram.; Pulv. tragacanth, 2 scruples. Make six pills.—*Drug. Circ.*

A New San Francisco Medical Journal.—A monthly medical journal, called *The Western Lancet*, was started in January, at San Francisco, Cal. The new enterprise is edited by Eustace Trenor, A.M., M.D., and Heman P. Babcock, M.D.

Four Children at a Birth.—A woman, residing at Northampton, Mass., gave four children at a birth. The mother and children were doing well at last advices. She has had seven children within the last thirteen months.

Deadliness of War-Weapons.—Of 3,453 Germans wounded before Metz, no fewer than 95.5 per cent. were struck by Chassepot balls, 2.7 per cent. only were wounded by projectiles from heavy guns, and there were only 0.8 per cent. of wounds from cold steel. No fewer than 25,000 Frenchmen in all were struck by the projectiles of the German artillery. This gives an average of one effective shot in every three fired from the German batteries, a result which appears hardly credible.

Unfortunates in this Country.—According to the late census, the class of "Unfortunates" in the United States gives a grand total of 98,434. Of blind, 20,320, of whom 17,043 are native, and 3,277 foreign. Deaf and dumb, 16,205; native, 14,689; foreign, 1,336. Insane, 37,382; native, 26,161; foreign, 11,221. Idiotic, 24,527; native, 22,852; foreign, 1,675.

Baltimore College of Dental Surgery.—Since this institution was chartered in 1839, 682 students have received its diploma. For many years the Baltimore College was the only dental institution in the world; now, however, there are nine dental colleges in this country.

At the Thirty-second Annual Commencement, held February 29, 1872, the degree of D.D.S. was conferred upon eighteen graduates.

Death of an Old Physician.—Dr. Richard S. Spofford, of Newburyport, died recently in that city, at the age of 83 years and 8 months. He took his medical degree at Harvard College in 1815, and began practice in Newburyport in 1816.

Commencements of Ohio Medical Colleges.—The Miami Medical College held its regular annual exercises February 29. Diplomas were presented to 67 graduates.

The Medical College of Ohio held its annual commencement March 1st, and 87 of the graduating class received diplomas.

Death of a Prominent French Physician.—Dr. Barthelemy Roch, President of the Medical Association of Alais, France, since the year 1854, died lately, aged 94 years.

An Enormous Aërolite.—A specimen weighing 36 tons has been presented to the Paris Academy of Sciences by the Danish and Swedish Governments.

Secondary Hæmorrhages.—In the "Surgical Letters from the Field Hospitals of Weissenburg and Manheim," by Dr. Th. Billroth, of Vienna, translated for the *Kansas City Medical Journal*, from the *Berliner Klin. Wochenschrift*, the subject of secondary hemorrhages is practically discussed. Amongst the 132 wounded under his immediate charge at Weissenburg there were 16 cases of serious secondary hemorrhage—11.7 per cent. of all the cases. Of the sixteen, 13 died—81.2 per cent. If those cases seen at Manheim are added, there would be a total of 27, of whom 22 died—81.4 per cent. In the 16 cases noticed at Weissenburg, the nature of the wounds was as follows: gunshot wound of the neck, 2; gunshot wound of the chest, 2; gunshot wound of the knee-joint, 1; gunshot wound of the foot, 1; gunshot fracture of the thigh, 6; gunshot fracture of the leg, 3; amputation of the thigh, 1. The hemorrhages occurred from the fourth to the 27th day after the injury. In three instances—wounds of the neck, leg, and foot—compression and the tampon were employed; in two (wounds of the chest) deep sutures were used; all five of them died. In the remaining 11, ligatures were applied as follows: to the subclavian artery, once (died); to the femoral artery, at the border of the sartorius, 5 times—2 recovered, 3 died; to the external iliac, 5 times—one recovered, 4 died. Of these last 11 cases, only three succumbed as the direct result of the ligation; the rest were carried off by pyæmia at a variable period after the application of the ligature, and without any hemorrhage having occurred in the mean time.

Angioma Cavernosum.—An important case of angioma cavernosum, situated in the external auditory canal, and attached by a slender pedicle to the manubrium mallei, is the subject of a reprint from Knapp & Moos' *Arch.*, II., 1. The paper is accompanied by a well-defined steel cut illustration of the polypoid angioma cavernosum.

Original Communications.

A CONTRIBUTION TO

THE KNOWLEDGE OF THE CHEMISTRY, AND PHYSIOLOGICAL, THERAPEUTICAL, AND TOXICAL ACTIONS OF VERATRUM ALBUM, VERATRUM VIRIDE,

AND THEIR ALKALOIDS.

By EUGENE PEUGNET, M.D.,

NEW YORK.

(Read before the Medical Society of the County of New York.)

Mr. President and Gentlemen—A remarkable case of poisoning by veratrum album having come under my observation, I found, in searching its literature, also studying its composition and properties, its physiological, therapeutical, and toxical effects, as well as those of veratrum viride, many facts of interest as to their relative composition. The effects produced by them and their alkaloids upon the animal economy, although possibly not presenting anything absolutely new or positively original, I have endeavored to condense and digest into as small a compass as possible, hoping that they might be of interest to the members of this Society.

Botanical History.—Veratrum album and veratrum viride belong to the same genus, their order being the melanthecæ; Linnean system, the polygamia monœcia. Both are perennial plants, the first a native of Europe, found principally in the Pyrenees and Switzerland, the second a native of this continent, found principally between the Canadas and North Carolina. Although botanists have failed to detect any essential differences in their botanical relations, the plants differ essentially in their composition and properties, as well as in their therapeutical and toxical effects.

All portions of the plant of veratrum album are poisonous, but the rhizoma or root is the only portion used in medicine. It deteriorates by keeping; whilst in veratrum viride, Prof. Procter found the stem entirely inert, the virtues of the plant residing in the rhizoma.

Chemical History.—Pelletier and Caventon analyzed veratrum album in 1819, and found in it a salt, the supergallate of veratria, which they considered identical with the veratria obtained from the sabadilla seeds.

Simon believed that he had found two other alkaloids in it, one of which he called jervina, after the Spanish poison of that name; the other baratyna, owing to its being precipitated from its solutions in acetic and phosphoric acids by the addition of sulphuric acid or the sulphates.

Fluckiger of Berne, in 1866, found another active principle in it besides the veratria, but was unable to isolate it sufficiently to ascertain its exact nature.

Not having been able to obtain either Simon's or Fluckiger's processes for extracting the alkaloids, I made use of the following one:—

A portion of either the imported powdered root, or else some of the root which had been coarsely ground here, was placed in a jar; a sufficient quantity of acetic acid (spec. grav. 1036) diluted with twenty parts of water, to cover the root, was added, and allowed to stand for forty-eight hours; the whole mass was then placed in a percolator, and allowed to percolate; fresh acidulated water added until the root was exhausted.

Having filtered the acidulated water through paper, a precipitate was thrown down by the addition of a sufficient quantity of carbonate of soda, a small quantity of alcohol having been previously added to retain the coloring matter. The carbonate of soda deepened the color of the solution; but any other alkali produces the same effect. When the precipitate had fully separated, the supernatant fluid was drained off, the precipitate collected on a filter, thoroughly washed and dried. As the addition of sulphuric acid or the sulphates had only thrown down a precipitate of lime from the solution in acetic acid, the precipitate was redissolved in water acidulated with sulphuric acid; the only residue left was a minute portion of earthy salts and resinous matter; nothing revealed the existence of baratyna. A small quantity of alcohol having been added to the solution, a precipitate was thrown down, by the addition of ammonia, sufficient to produce a slightly alkaline reaction. The precipitate, collected on a filter, when thoroughly washed and dried was shaken with successive portions of pure ether (the purity of the ether is essential, as I failed in several of my experiments, owing to the presence of alcohol), until two or three drops of ether left no residue on evaporation; and a drop or two of sulphuric acid on the evaporating dish or glass failed to produce any reaction.

The ethereal solution was then filtered and allowed to evaporate; the residue left was of a golden brown color, and of a semi-crystalline appearance, due to the presence of some resinous and coloring matter; it was redissolved in water acidulated with sulphuric acid, the solution filtered thus separating some undissolved resinous matter; a small portion of alcohol added to the filtrate to retain the coloring matter, then a precipitate formed by the addition of ammonia; this was collected on a filter, washed and dried; it was then redissolved in alcohol 95°, the solution digested with animal charcoal, filtered, and a precipitate formed by the addition of a sufficient quantity of water, and collected on a filter; at first it was apparently colorless, but, as it dried, presented a dull brownish-gray color, and was amorphous; redissolved in ether and filtered, it was left, on the evaporation of the ether, in white scales on the dish.

The portion insoluble in ether was treated with 95° alcohol until exhausted, leaving a small residue, consisting of earthy salts and coloring matter. The alcoholic solution having been filtered, a precipitate was formed by the addition of a sufficient quantity of water; the precipitate collected on a filter; when dry it was white, amorphous, and pulverulent.

A fluid extract having been prepared from the exhausted root, the resin was precipitated by the addition of a sufficient quantity of water, and collected on a filter. When dry it was successively treated with portions of water, respectively acidulated with acetic and muriatic acids; however, both failed to extract anything further. As the resin was found to still possess active properties (Exp. XXXVIII. to XLIV.), a portion was treated with ether until exhausted, the ethereal solution filtered, and the ether allowed to evaporate; the residue left was dark and oily, of the consistence of a freshly-prepared extract. A second portion was boiled with successive portions of diluted ammonia until exhausted, the residue collected on a filter, washed and dried; it was of a yellowish color, and pulverulent. A third portion was boiled in successive portions of diluted liquor potassa until a soft gelatinous mass remained, solidifying and adhering to the bottom of the vessel as the fluid cooled; when dry it was of a brownish-gray color, and pulverulent.

The resin was precipitated from its solutions in liquor potassa and ammonia by the addition of dilute sulphuric acid, washed and dried. I only succeeded in

separating by ammonia and potassa the two principles in one specimen of the imported powdered root; whilst in the imported root ground here, I failed entirely; once or twice there was a trace in two pounds of it. This latter is probably due to the careless manner in which the root is gathered for export; also to the length of time it may have been kept.

The first of the principles extracted by ether is undoubtedly the basis of the salt obtained by Pelletier and Caventon, subsequently by Simon and others; it is identical with the veratroida of veratrum viride. Soluble in alcohol and chloroform, the alkalies and their carbonates precipitate it from its solutions. It forms salts with the acids; the sulphate, nitrate, and muriate are but sparingly soluble; the acetate readily so; but all of them require an excess of acid to make them so.

When treated with concentrated sulphuric acid it dissolves to a reddish-yellow, changing to an ochrey-red, then to a reddish-brown, then to a brown, in a few hours to a purple, which continues for some days. Dissolved in nitric acid, it gives a rose-tinge. It does not respond to the sulphuric acid, but does to Trappe's test for veratria. It has an acrid, pungent taste, and a powerful sternutatory effect.

The second principle, the one extracted by alcohol, is the jervina of Simon; he found it to be composed of C_{30}, H_{35}, N_2, O_6. Will's analysis varies as to the number of equivalents; at 180° F. it loses four equivalents of water, melts above that temperature, and fuses at 360° F.; is white, tasteless, and has no sternutatory effect. With acids it forms salts; the sulphate, muriate, and nitrate are but sparingly soluble, whilst the acetate is more so. When treated with concentrated sulphuric acid, it dissolves to a yellow, changing slowly to a grass-green, and in a few hours becoming brown; in nitric acid to a red rose, then to a brick-red, and finally to an orange-yellow, which remains unchanged for some time; in muriatic acid to a red rose; in boiling turns to a green. The substance separated from the resin by ammonia is soluble in alcohol, insoluble in ether, chloroform, or acidulated water. When treated with concentrated sulphuric acid, it produced a faint pink or rose-color; with nitric acid, first a light rose, then turning to a light brown; with muriatic, a faint pink or rose. It melts slowly and fuses. The substance, separated by means of liquor potassa, is soluble in alcohol and chloroform, and insoluble in ether, benzole, or acidulated water. When treated with concentrated sulphuric acid it dissolves slowly, producing first a dark-brown color, which finally turns to a reddish-brown; with nitric acid, first a beautiful blood-red, then to a light brown; with muriatic acid, no reaction whatsoever. Melts easily and fuses.

In this analysis we find that two alkaloids, the veratroida and jervina, have been extracted; and that the resin contains a distinct organic principle, not of basic origin, but existing in a complex form; it is therefore a resinoid, and is, properly speaking, the veratrine of veratrum album.

Mr. Freye, chemist for Messrs. Caswell, Hazard & Co., extracted the alkaloids for me by the process made use of by Mr. Charles Bullock in his analysis of veratrum viride (*Amer. Journ. Pharm.*, September, 1865, and March, 1866); that is, by the preparation of a fluid extract, giving it a decided acid reaction by the addition of dilute acetic acid, precipitating the resin by the addition of water, collecting it on a filter; then precipitating the alkaloids from the filtrate by the addition of carbonate of soda, finally separating them by means of ether and alcohol.

Veratrum Viride.—In veratrum viride, Mr. H. W. Worthington was the first to announce that he had found an alkaloid which he considered identical with veratria. Mr. Joseph B. Richardson, in 1857, stated that he had found an alkaloid in it similar to the one extracted from veratrum album.

Mr. G. J. Scattergood, in 1862, demonstrated that the principle supposed to be veratria, which he extracted by means of water acidulated with sulphuric acid, was associated with a resin possessing a greater sedative action on the circulation than the resin itself.

Dr. S. R. Percy, in his prize essay, published in 1864, which is very exhaustive, considered the alkaloid, which he extracted by means of muriatic acid, identical with veratria. He also found that the resinoid possessed an active sedative action.

In 1865, Mr. Chas. Bullock, of Philadelphia, made an elaborate investigation of the composition of the root, and found two distinct alkaloids in it, one soluble in ether, the other insoluble, but both soluble in alcohol. Neither of these alkaloids responded in its chemical reactions to veratria; both were amorphous and white, producing the same chemical reactions; viridia differing from veratroida in its insolubility in ether and its higher fusing point, requiring from 335° to 340° F., whilst that of the latter is from 270° to 275° F.

Mr. Bullock's process differed essentially from the others, in that, instead of treating the root with acidulated water, he first prepared a fluid extract, as mentioned heretofore.

Mr. G. J. Scattergood and Dr. Percy having demonstrated by their investigations that neither sulphuric nor muriatic acids fully extracted the virtues of the root, whilst Mr. Bullock demonstrated by his that acetic acid does it effectually, I extracted the alkaloids by the same process made use of in extracting the alkaloids from veratrum album.

The alkaloid veratroida, taken up by the ether, is identical in its reactions and properties with the alkaloid extracted in a similar manner from veratrum album, and the name given to it in the last edition of the United States Dispensatory is a very appropriate one; for although possessing some of the properties of the veratria it is entirely distinct from it, as established by the experiments of Richardson and Bullock, as well as by the utter failure of either alkaloid to respond to the sulphuric or to the nitric acid test when I tested them; for veratria turns yellow with the latter.

The alkaloid viridia, first obtained by Bullock by means of its insolubility in ether and solubility in alcohol, is tasteless, white, amorphous, pulverulent, and is not a sternutatory. The chemical reactions obtained were absolutely the same as those of the jervina of veratrum album; neither of these alkaloids responded to tests for veratria or the veratroida.

These reactions vary essentially from those obtained by Bullock, but I think this is due to his having failed to fully separate the veratroida from the viridia, as the purity of the ether is essential, to prevent a portion of the viridia being taken up by it.

Then, in order to ascertain if the veratroida is fully separated from the viridia, the evaporating and sulphuric acid tests, as mentioned heretofore, should be tried.

There is an excess of the veratroida in veratrum album, and an excess of the viridia or jervina in veratrum viride.

As to the exact proportions of the alkaloids to a given quantity of the root, it is impossible to fully determine. Mr. Bullock obtained from thirty-two ounces of veratrum viride 9.2 grs. of veratroida, and 15.7 of viridia; from the same quantity of the root I obtained about the same proportion; from another a large excess of viridia.

The same is true of the so-called veratrin of Keith & Co., and Tilden & Co., in some more of one and less of the other. From one specimen of Norwood's own tincture I obtained 1.5 gr. to the ounce of the combined alkaloids, from another 1.9 gr. These variations are almost entirely due to the manner in which the root is gathered. The same is true of veratrum album.

I regret that this chemical history is not as thorough and complete as it should be; but the want of a proper laboratory, as well as a want of experience, must be my excuse. I would here tender my thanks to Mr. Ferd. Spangenberg for his valuable advice and assistance in extracting and preparing the alkaloids.

The resin of veratrum viride was found to be entirely inert.

Having shown that the two varieties of veratrum possess much in common in their chemical history, but that there exists in veratrum album a distinct principle which does not exist in the other, I will pass to the history of their physiological, therapeutical, and toxical effects.

Veratrum Album.—The first clear and succinct account of the history and effects of this variety was published by Schabel, at Thulingen, in 1817, in his inaugural thesis: he considered it a prompt and sure emetic, and that in whatever manner administered it produced nervous prostration and intestinal irritation. Horn subsequently confirmed his views as to its action as an emetic. In the various pharmacopœias it is now recommended as a sternutatory, when combined with some innocuous powder.

It was formerly extensively employed in the treatment of various nervous, gouty, and chronic cutaneous affections; but owing, to the uncertainty of its action, and being powerfully irritant, it has gradually fallen into disuse. However, in Germany its tincture enjoys a great, and, I think, deserved reputation in the treatment of pityriasis versicolor. It has a popular reputation on the continent and in England, in the treatment of scabies and pediculi. By certain empiricists it is extensively used in the treatment of certain forms of diarrhœa and dysentery which have lost their acute character, and have become subacute or chronic.

Pereira reports three cases of poisoning where an infusion of the root was taken, in which extreme prostration, without purging, resulted (Dr. Raynor's, of Stockport).

Christison, three cases, in which a quantity of the powdered root was taken. In the course of an hour they all experienced a burning sensation in the throat, œsophagus, and stomach, followed by vertigo, purging and dysuria, weakness and rigidity of the limbs, vertigo, loss of sight, great faintness, convulsive breathing, and small pulse. One of them, an elderly woman, who had partaken of the largest quantity, had an imperceptible pulse, stertorous breathing, and total insensibility. On the following day an eruption appeared on the body.

He also quotes from Rust's journal, that a family of eight ate bread in which some of the powdered root had been mixed by mistake; in all of them symptoms of gastro-intestinal irritation manifested themselves.

Blas, two cases, one of whom, a boy three and a half years of age, took from six to eight ounces of the decoction; the other, an infant aged eighteen months, took a smaller quantity; both recovered. They presented the following symptoms: vomiting an acid fluid, containing half-digested food, with yellow mucus; countenance pale, head hot, general surface cold; pulse small, slight convulsive twitchings of the limbs; dilated pupils, eyes staring, with revolving movements of the eyeballs.

Mavel d'Ambert (*Jour. de Chimie*, 1851) gives an account of the poisoning of an entire family, who had partaken of soup made in a utensil in which a decoction of the root had been prepared the day before, and which had not been thoroughly cleansed. They all presented symptoms similar to those of cholera: the mother, who suffered the most, he found in a state of collapse, with a blue, anxious face, eyes expressionless and loss of sight; pulseless; diminished temperature of the body, and vomiting incessantly, accompanied with violent tenesmus. He first administered emetics; when the vomiting had ceased, gave opium; applied dry friction and mustard sinapisms to various parts of the body. In the course of a few hours reaction set in. On the fourth day a peculiar eruption broke out on one of her calves, which could not have been produced by the mustard.

Nivet and Giraud (*Gaz. Hebdom.*, vol. viii., No. 31) relate that three members of a family suffered from poisoning by veratrum album, two of whom died. The eldest brother, twenty-five years of age, was suddenly taken ill, in the latter part of June or early in July, 1860, with the following symptoms: violent pains in the epigastrium, intense thirst, severe burning sensation in the throat and upper portion of the abdomen; these symptoms soon subsided. Some time afterwards, from some unknown cause, they recurred with increased violence.

On the 29th of August, Dr. Chalvignac observed that his face was thin; expression anxious; a dark circle surrounding the eyes; sight only affected whilst and immediately after vomiting; no delirium; mind clear, temperature of the skin normal; inappetency; unquenchable thirst; burning sensation of the epigastrium extending to the œsophagus; acid ructus; frequent vomiting, increased by drinking, occasionally streaked with blood; sanguineous stools, accompanied with tenesmus; secretion of urine normal. He died on the 31st of August.

The younger brother, twenty-two years of age, was taken ill about the 1st of September, with symptoms similar to those of his brother, with the exception of sanguineous stools and tenesmus, and died on the 14th of September.

Their mother was taken ill on the 25th of August, with symptoms similar to those of her sons. On the 29th the doctor observed the following symptoms: a marked prostration, tinnitus aurium, sight only affected whilst vomiting; insomnia; pulse seventy-five and regular, tongue coated and smooth; inappetency, thirst not as intense as in the first days of her illness; uniform redness of the mucous membrane of the throat, slight tumefaction of the tonsils. The pain in the throat, œsophagus, and epigastrium, at first intense, has in a manner subsided; slight nausea; no purging since the day before. If she attempted to rise or walk there was a tremor in her limbs and uncertainty in her gait. She continued to improve, but had a relapse, and finally recovered on the 22d of September.

At the inquest, it was shown that—1st. A white powder had been administered to them. 2d. Some of the root of veratrum album was found in a cooking utensil. 3d. In the post-mortem, made October 15th, that putrefaction was too far advanced to note pathological changes. 4th. The liver, intestines, pancreas, lungs, and hearts of the brothers contained an alkaloid similar to veratria. 5th. Some of the substance extracted from the organs of the eldest brother, given to a chicken, produced all the symptoms of poisoning by veratria.

In the *British Pharmaceutical Journal and Transactions* for February, 1868, the case of a young man who took a portion of three-penny-worth of the powdered

root is reported. The effects of the poison immediately manifested themselves, and he died in a comparatively short time, in the greatest agony.

Orfila, in his treatise on toxicology, states that several cases of uterine hemorrhage had been produced by the use of the root as a sternutatory.

On the 4th of August, 18—, whilst on a professional visit to a summer resort, I was requested to see a young married lady, who was in a state of collapse.

At about 6.30 P.M., she had taken by mistake, as I subsequently ascertained, half an ounce of the homœopathic mother tincture of veratrum album, equivalent to half a drachm of the powdered root; this tincture was prepared in the Hartz Mountains of Germany, from the green root. In a subsequent analysis of the same tincture, I found that each ounce contained $1\frac{5}{6}$ grain of the active principles of the root. She had consequently taken $\frac{1}{3}$ grain. Immediately after taking it she felt soothed and quiet, having been exceedingly nervous before.

At 10 P. M. her hands and feet became numb, a sensation which gradually extended over the whole body. She attempted to rise, but had two attacks of syncope in rapid succession; was taken immediately afterwards with violent vomiting.

10.30 P. M.—I found her pulseless, heart pulsating feebly and irregularly; resp. twenty-two and regular; eyes fixed and staring; pupils dilated; almost total loss of sight; the body covered with a cold and clammy perspiration; complete anæsthesia of the skin; voice as clear and as strong as in the collapse of cholera; lips of a bright carmine; mind clear, calm, and collected; thought that she was dying; vomiting and retching incessantly; the fluid ejected was viscid, glairy mucus, of a greenish hue. As there was no purging, and recognizing the action of some powerful sedative poison, I gave her an enema of brandy and water, three ounces of each, and thirty drops of ammonia, followed in a short time by a second, both of which were retained; then rubbed her limbs with dry mustard; applied mustard plasters to the epigastrium; then administered a third enema, which was forcibly retained.

As violent purging accompanied with severe tenesmus set in shortly afterwards, recourse was had to the administration of small quantities of brandy by the mouth, at short intervals, and the application of ammonia to the nostrils.

Aug. 5th. 1 A.M.—Pulse perceptible for the first time, 38, feeble and intermittent; anæsthesia of the skin continues; vomiting not as violent, purging incessantly, accompanied with tenesmus; can now see distinctly. 3 A.M.—Pulse 44; anæsthesia continues; temperature normal; intense thirst. 10 A.M.—Pulse 96; vomiting occasionally; salivated and bloody stools frequent; marked pain in left iliac region, extending to left hypochondrium, increased by pressure.

Aug. 6th, 6 A.M.—Pulse 100; passed a restless night; tympanitis, marked tenderness of left iliac region; nausea, vomiting at intervals; tenesmus, with bloody stools every hour; pupils normal; anæsthesia persistent; thirst intense.

Aug. 8th, 6.30 A.M.—Pulse 105; tongue dry, furred, and brown; gums inflamed and tender, bleeding freely at intervals; aphthous ulceration of the palate; breath offensive; ptyalism profuse; nausea persistent; vomiting occasionally; stools frequent and bloody; occasional exacerbation of pain in left iliac region and left hypochondrium, increased by pressure.

Aug. 10th.—Pulse 105; tongue furred; gums ulcerated; nausea, but no vomiting; purging not as frequent; stools no longer bloody; anæsthesia of the lower extremities; a profuse flow of blood from the uterus came on during the night, although the menses were not due until the 22d.

Aug. 11th.—Pulse 94; marked improvement. From this time forward she continued to gain rapidly. The treatment, after reaction took place, consisted of opium, bismuth, and camphor, to check diarrhœa and allay pain; effervescing draughts to allay nausea; the diet of milk and lime-water, also brandy and beef-tea.

Aug. 14th.—I left her, as I supposed, convalescing; she felt comparatively well, diarrhœa almost checked, occasional anæsthesia of the upper and lower extremities. On the 16th sat out of doors; on the 17th took a ride; on the 18th another; was taken that night with violent tenesmus and catharsis; stools bloody; also slight nausea.

Aug. 22d, 12.15 A.M.—Having been telegraphed for, I found her pulse 102; tongue furred and brown, edges red, papillæ raised; tympanitis, tenesmus, pain in left iliac region, extending to left hypochondrium, increased by pressure; frequent bloody stools and nausea.

Aug. 25th.—Left her improving, with directions for her removal to the city on Monday, the 28th, as I did not deem it prudent for her to remain longer, owing to the marked insalubrity of the place, caused by miasm and defective drainage; as there then were in the same wing of the hotel two cases of dysentery, one of which was typho-malarial. The treatment, as suggested by a very intelligent practitioner before I was sent for, was the occasional administration of Squibb's liquor opii comp.

Aug. 29th.—Arrived home last night; passed an uncomfortable night; pulse 100; recurrence of diarrhœa; evacuations very offensive, black, also some mucus, streaked with blood; nausea, vomited twice, viscid greenish mucus, streaked with blood; tongue furred. Ordered enema of liquor ferri persulphatis, 20 drops in ʒ iv. of water every four hours, which were discontinued after the third, on account of the pain and violent hysteria; 5 drops of the liquor were administered every four hours instead, also a pill containing argenti nitras $\frac{1}{12}$ gr. and ext. opii $\frac{1}{4}$ gr. every alternate 4 hours.

Sept. 2d.—Sanguineous stools having ceased, pepsine gr. iij. and bismuth trisnitras gr. xv. were given every two hours; quiniæ sulphatis gr. ij. every fourth hour; paregoric whenever necessary to allay tenesmus.

Sept. 8th.—Prof. Alonzo Clark in consultation. Pulse 84; tongue smooth and clear; pain in left iliac region, extending upwards; from fourteen to sixteen stools in the twenty-four hours, dark and small, accompanied with tenesmus. Morphiæ sulphas $\frac{1}{16}$ gr. added to pepsine and bismuth.

Sept. 17th.—Pulse 102; tongue furred, dry and brown, edges red, papillæ raised; no improvement, as the morphine was evidently acting as a nervous irritant; discontinued it, and substituted salicine gr. v. every four hours, discontinuing all other remedies.

Sept. 22d.—Marked improvement; lying on lounge.

Sept. 25th.—Evacuations very frequent, containing mucus streaked with blood; insisted upon giving an enema of Oj. of warm water, with long flexible tube, which she had heretofore strenuously objected to. Considerable mucus, streaked with blood, came away, also shreds of mucous membrane, and but a trace of fæcal matter; the pain from the distention of the intestine was intense; ordered a suppository of ext. opii aq. and argenti nitras ãã gr. $\frac{1}{4}$ every four hours.

Sept. 26th.—Feels more comfortable; fewer evacuations; administered an enema of warm water Ojss.; it was followed by a discharge of mucus streaked with blood, shreds of mucous membrane, and but little fæcal matter.

Sept. 27th.—Improvement continues; another enema administered, followed by a discharge of less mucus, but few shreds of mucous membrane, and partially formed fæces, but quite attenuated.

Sept. 30th.—Steadily gaining; a fourth enema administered, followed by the first well-formed and perfectly healthy evacuation, with the exception of its extreme attenuation, evidently caused by a contraction of the colon.

From this time forward the recovery was rapid; with the exception of insomnia, nervousness, tremor of the limbs, uncertainty of gait when the first attempts to walk were made, the only nervous symptoms which manifested themselves during the progress of the case were the loss of sight, paralysis of the recti muscles of the eye, and the anæsthesia; this last symptom persisted until the middle of September, migratory in its character, recurring principally on the anterior surface of the forearm, and on the thigh following the course of the anterior crural nerves. The urine was not examined at first, but in subsequent examinations an abundance of amorphous matter with a large amount of the crystals of oxalate of lime were found.

The only remedy which effectually controlled the insomnia was the hydrate of chloral in ten-grain doses.

I regret that the temperature was not taken note of; but as I did not expect to require my thermometer, I had left it at home.

The digestion was so much impaired, that milk, gruels, beef-tea, broths, steaks, and confections of raw beef had to be successively abandoned; game, chicken, fish, and bread being exclusively relied upon.

The emaciation, at first very great, rapidly disappeared. On the 31st of January following her health was perfect, and the fæcal evacuations had entirely recovered their natural form and size.

There are several points of interest in this case.

I. That the poison had been taken fully three hours before any decided symptoms manifested themselves, and therefore absorbed.

II. That the poison taken into the circulation acted directly on the vaso-motor nerves, is seen by the anæsthesia, the loss of sight and paralysis of the recti muscles, and diminution of the temperature.

III. That its powerful sedative action on the circulation only manifested itself after its primary action on the nervous system.

IV. That its action on the alimentary canal as an emetic and cathartic was due to its special action on the pneumogastric nerve, through the circulation, and not to any action as a local irritant, is shown by the fact that these were the last symptoms developed instead of the first—also by the experiments of Prof. Horatio Wood with the veratroida.

V. That the first pathological change in the alimentary canal, from the gums to the rectum, was probably one of the intense hyperæmia and congestion, due to a paralysis of the vaso-motor nerves, and that a thickening and contraction of the intestines ensued; and that the gastro-enteritis was a secondary effect, will be shown by Exp. XXXIII. to XLVII., inclusive.

VI. That the contraction of the colon, causing the extreme attenuation of the fæces, was not due to ulceration and cicatrization, is shown by its gradual and perfect restoration; further, that there was not at any time any indication of intestinal obstruction.

VII. That the uterine hemorrhage was the result of an intense uterine congestion will be shown by Exp. XXXVIII.

In experimenting upon animals, Schabel observed that three grains of the powdered root, applied to the nostrils of a cat, killed it in sixteen hours; that a small piece of the root, inserted into the rectum of a cat, was followed in fifteen minutes by dyspnœa, frothy vomiting, alvine evacuations; root expelled; finally, inflammation of the rectum with a tendency to prolapsus. Three grains of the extract, introduced into the trachea of a cat, caused gastro-enteritis and death; poison absorbed by left lung.

Orfila introduced into the thigh of a dog fifteen grains of the powdered root; it caused vertigo, vomiting, and purging, then in seven hours death. The post-mortem revealed slight inflammation of the mucous membrane of the stomach, and red patches of this membrane in the rectum.

Viborg and Scheele injected from twenty-five to thirty drops of the tincture into the jugular veins of several horses and cows; vomiting, purging, and tenesmus were the effects produced; but in half an hour they had all subsided.

Schroff, of Vienna, says, "that neither veratria nor veratrum produces gastro-enteritis, but that at the site of their operation they produce a passing hyperæmia, resulting, if intense, in the shedding of the epithelium of the stomach and intestines. Nausea is a constant result of the vomiting; but the purgative action of the drug is uncertain. Spinal spasms affecting animal life are wanting; symptoms of reflex paralysis present themselves.

"There is a great tendency to increase the secretion of the intestinal canal; it accelerates the evacuation of the fæces; but when given in poisonous doses it does not produce diarrhœa. Golden coincides with Schroff."

Dr. Oulmont, of Paris, in various experiments on dogs, rabbits, and frogs with the tincture of veratrum album—administered hypodermically—gives the following as the result of his observations:—

"The first effect was on the circulation; a remarkable falling of the pulsations, then a diminution of the temperature of from one to five degrees; the respiration becoming slow and irregular; followed by vomiting and purging. The most prominent symptom was the extreme prostration, followed by insensibility and total loss of power; the animal totally insensible to electric shocks or any other irritation; finally, inflammation of the entire alimentary canal, followed by death in from one to three hours."

In briefly reviewing the various cases of poisoning quoted, as well as the experiments and conclusions of various observers, I find that whenever the root has been given, either in substance or its tincture, and in whatever manner administered, the same symptoms have invariably manifested themselves in a greater or less degree, according to the quantity taken, and which are so concisely and tersely described by Oulmont. However, I doubt whether gastro-enteritis had had time to develop itself in his experiments, and I prefer to indorse the views of Schroff and Golden as to its being intense hyperæmia. In reference to its modus operandi, I expressed my views in reviewing my case of poisoning, and will enlarge upon it when treating of

Veratrum Viride.—You are so familiar with veratrum viride, that it is almost a work of superfluity to enter into a detailed history of its virtues; however, I will be as brief as possible.

Although Doctors Tully and Ives were the first to investigate its therapeutical virtues, the attention of the profession was not called to it until the publication of a very able paper by Dr. Charles Osgood, of Providence, R. I., in 1835 (*Am. Jour. Med. Sciences*, vol. xvi., 296); but it was only brought into general use after the publication of the pamphlet of Doctor W. C.

Norwood, of Cokesbury, S. C., in 1851 (*Charleston Med. Rev.*, vol. vii., 768). He had a remarkable success with it in the treatment of pneumonia and typhoid fever; by others it was recommended in the treatment of inflammatory rheumatism, puerperal fever, and other inflammatory diseases; by Professor G. B. Wood, in reducing the pulse in cardiac diseases. Dr. Jacquemier first alluded to it in France, in a review of Prof. Fordyce Barker's essay on its use in puerperal fever (*Gaz. Hebd.*, 1857).

In 1866, Dr. Theodore Kocher published an essay at Wurtzburg on the treatment of pneumonia by the preparations of veratrum viride; it was based upon the treatment of sixty cases of uncomplicated pneumonia by the exclusive use of the resin of veratrum viride, at the Clinique of Berne, by Professor Biermer; the mortality was only eight, 3 per cent. less than followed any other course of treatment. 21 cases out of 25, in which the first manifestation of the disease could be exactly established, recovered in less than six days.

Dr. Oulmont, in an essay read before the Academy of Medicine, Paris (*Bul. Gén. de Thérap.*, lxxiv., 145), in 1867, warmly advocates its use in inflammatory affections.

It is generally administered in tincture, or fluid extract; by some the resin is preferred. Dr. S. R. Percy advises the use of a tincture prepared from the resin which has been exhausted by water acidulated with sulphuric acid, but this does not fully extract the veratroida, and if it did, the tincture would not possess any sedative action. The most reliable preparation is Norwood's, but even that cannot always be relied upon, as the root does not always contain the same proportion of the alkaloids.

This, like many of our most valuable remedies, is falling into disuse on account of the uncertainty of its action, also owing to the unpleasant nausea, vomiting, and even purging it sometimes occasions; but fortunately chemistry and physiology, as proven by the experiments of Scattergood, Percy, Bullock, and Horatio Wood in our own country, and those of Fluckiger and Oulmont in Europe, have revealed the existence of alkaloids to which all its therapeutical virtues are due. We will therefore not be obliged to see it sooner or later set aside, like its more active sister plant, and used only as a local application in the treatment of pityriasis versicolor, scabies, and pediculi, for which it is just as efficacious.

Uncertain as it is in its effects, I have found but one recorded fatal case resulting from its use, that of a feeble child, aged one year and six months, to whom its mother had administered, without the advice of a physician, probably not less than 35 drops of the tincture, in four or five divided doses, at intervals of half an hour. There was an attempt to vomit after the second dose; although the efforts were made every few minutes, there was only one successful, when a small quantity passed by the mouth. Dr. J. C. Harris, of West Cambridge, saw him seven hours after he had taken the first dose; he found him very pale, apparently unconscious, breathing almost stertorous; pulse 40, extremities cold, and a profuse cold perspiration over the whole body. He died thirteen hours after taking the first dose. The treatment consisted of stimulants and rubefacients, but no opiates.—(*Am. Jour. Pharm.*, September, 1865, 274.)

Yet Dr. Hewson, of Georgia, reports three cases, in two of which half a teaspoonful doses of the tincture were repeated in an hour, and in one two doses, of 30 drops each, were taken, to procure abortion—in all the cases with no bad effect beyond extreme nausea.

Dr. Tulafierro cites the case of a physician of Atlanta, Georgia, who took by mistake an ounce of the tincture at one time; the disturbance only amounted to extreme nausea and vomiting, and some difficulty of breathing. Dr. Loomis, of Buffalo, a case of acute rheumatism, where one teaspoonful of the tincture was taken at one time: the consequences were extreme vomiting, one or two movements from the bowels, but nothing like purging; great prostration, readily rallied from; followed by cure of the disease. (*Buffalo Medical and Surgical Journal*, Vol. VI., p. 124.) Dr. Percy, in his prize essay, cites four cases in a foot-note. A woman took a tumblerful of the strong decoction; it produced very alarming symptoms of prostration; by the ordinary stimulating remedies she recovered in forty-eight hours. An adult took a tumblerful of syrup, two quarts of which had been prepared from two pounds of veratrum viride, instead of American valerian, and, as it caused vomiting, the dose was repeated. The same alarming symptoms as in the preceding case followed, but in two days he was able to be about. A physician took thirty grains of so-called veratrin, the alkaloids and resin combined; he was out again on the third day.

A man, rather too fond of his neighbor's bottle, went into a country store, and finding a bottle marked "Old Rum," poured out and quickly drank nearly a tumblerful of the tincture of veratrum viride. Not wishing the storekeeper to know of it, he said nothing about it until it caused vomiting, and then, becoming much alarmed, told what he had done. A physician was sent for, rum was freely given, and the same night he walked home.

Dr. G. N. Edwards, of St. Bartholomew's Hospital (*Medical Times and Gazette*, Jan., 1865, p. 5), cites the case of a chemist who took a teaspoonful of the fluid extract, which was followed by the most alarming symptoms, but the patient recovered the next day.

In the eleven cases of poisoning, the only symptoms at all similar to those of veratrum album were the vomiting and great prostration; they differed essentially, in that there was no purging and no anæsthesia; also in the rapid recovery after reaction had taken place, whilst in the majority of the cases of poisoning by veratrum album the recovery was tedious; that is, where the root was given, either in substance or its tincture.

Dr. S. R. Percy admirably describes the general and special effects of veratrum viride on the system, supporting his views by observations and experiments which fully confirm them. "He never found it to act as a purgative, *per se*, when administered by the mouth; but believes that when it does it is due to its sedative action upon an irritated or inflamed condition of the muscular fibres of the intestines."

This view is indorsed by many; *per contra*, others entertain the opposite; but, from what I have observed, I am inclined to sustain his view. In small doses it may even produce vomiting, but is not apt to do so unless too frequently repeated.

However, its peculiar and characteristic action is its effect on the pulse. It is a reliable and powerful arterial sedative; with it the force and frequency of the pulse can be controlled almost at will. It lessens both vascular and nervous action, also relaxing the muscular system, and renders the respirations somewhat slower and easier. In medicinal doses it allays, controls, or deranges nervous influences, but in poisonous doses destroys them. It seems to have but little action on the mind; it produces a languor, disposition to sleep, unwillingness to be disturbed; but this is most noticeable in large or poisonous doses. By diminishing the rapidity of the supply of the blood

to the brain it causes vertigo, especially in moving; seldom produces headache. In full doses it diminishes sensibility, but he has never noticed any marked impairment of sight and hearing when administered to man; in animals he has noticed both. When under its full influence, a change of position will produce vertigo, or even syncope. By relieving congestion, irritability, and pain, it frequently induces sleep, but not by any narcotic action.

In moderate doses it produces a muscular relaxation; in fuller doses, a feeling of weakness and prostration; but the effect soon passes off. In full doses upon animals, it paralyzes both the voluntary and non-striated muscles, and in those cases which are fatal, the result is produced by paralysis of the heart's action. The muscles lose their contractile power, and do not act well under the stimulus of galvanism. It sometimes dilates the pupil, but generally it merely fixes the pupil, owing to a loss of power of the recti muscles, thus giving it the appearance of dilatation, because it is kept in the centre without motion.

The influence of veratrum viride on the secerning organs is very marked; it augments the secretion from the pulmonary mucous membrane, increases the expectoration; but in the stage of prostration there is no longer power to expectorate. The doctor has not been able to satisfy himself that it either diminishes or increases the quantity of urine excreted. In cases of dropsies from obstructed portal or cardiac circulation, with a frequent irritable pulse, it produces a copious discharge of urine, which he thinks is caused by subduing the heart's labored action.

It produces a moisture, free diaphoresis, and cold, clammy sweat, according to the amount taken or administered. It acts early as a sialagogue.

In reference to its modus operandi, he comes to the conclusion that it acts upon the system by transmission with the blood, and that its effects do not take place until after its absorption into the blood is proved by—

1st. Its peculiar action on the system when introduced elsewhere than into the stomach.

2d. The greater rapidity of its action when introduced directly into an artery or vein.

3d. Its action on the various secerning organs, either when taken into the stomach, or when introduced into an artery or vein, a serous cavity, or the cellular structure. The presence of its alkaloid in the secretions formed out of the blood, also the production of its physiological action when the saliva, milk, or urine of an animal to which it has been administered is given to another animal.

4th. Its peculiar action on the pneumogastric nerve, when it reaches that nerve only through the circulation.

5th. The absence of any impression conveyed to a distant part of the system when it is applied to the surface, together with the production of its topical effects to the nerves of the part to which it is applied, in proportion to the amount and rapidity of its absorption.

This point I do not consider well taken. 1st, on account of the infinitesimal quantity absorbed, even if one ounce of the concentrated tincture were applied. 2d, that if the alcoholic extract or the active principles of the root are applied, they will sometimes produce constitutional effects; its action is similar in that respect to aconite, belladonna, or their active principles, also veratria, etc.; whether it is by absorption into the circulation, or by an impulse conveyed by the nerves of the part, I am not prepared to assert, but I believe it to be by absorption into the circulation.

6th. The dilatation of the blood-vessels after its administration, visible by the microscope in the capillaries, and sensibly felt in the larger vessels by the slower passage and increased volume of the blood, and by the free diaphoresis produced.

7th. By its effects on the blood-discs, altering and diminishing their size.

He further believes that its therapeutical effects are due to its action on the membrana vasorum communis endangium, through the blood itself, and that it has also a powerful action on the vaso-motor nerves. These two last observations fully sustain his 6th proposition, for it is conveyed by the blood into the vasa vasorum, and through them paralyzes the vaso-motor nerves, the blood-vessels thus losing their contractile power, hence the dilatation of the capillaries; also by the increased volume and slower passage of the blood, observed in the frog's foot, and the contraction induced by the alcoholic stimulants, and especially by the tincture of cantharides; he attained similar results in his observations on bats.

It might be suggested that Claude Bernard had obtained similar results by dividing the sympathetic nerve, and that it was due to a special action on that nerve; this would à fortiori apply more particularly to veratrum album, on account of its more marked action on the alimentary canal, uterus, and bladder; but as the filaments of the vaso-motor nerves are principally derived from that nerve, especially in the abdominal viscera, the suggestion would not destroy the force of the proposition, or vice versâ.

Oulmont, in his observations on man and animals, found that although the general sedative action of veratrum viride was the same as that of veratrum album, it differs essentially from it in the following points:—

"1st. It does not have as intense an action on the alimentary canal, never produces inflammation of its mucous membrane, and the vomiting is not as violent or as persistent.

"2d. It does not act as rapidly, the animal does not die as soon, and the poisonous dose is generally double that of veratrum album."

He therefore concludes that it possesses a greater certainty of action and is a safer sedative.

Oulmont, like Percy, found that the resin exhausted by acidulated water possessed a remarkably sedative power.

In closely examining the authorities, cases, and experiments quoted, as well as my own observations, I arrive to the same conclusion as Percy as to the modus operandi of veratrum viride, with the above noted exceptions.

To the same conclusion as Oulmont as to the close similarity of the effects produced by the two varieties; also as to their two essential and characteristic differences.

Further, that neither of them has any direct influence on the brain; that although both are spinal motor depressants, the action of veratrum album is much more powerful; that it is in fact a spinal moto-sensatory depressant; also that its modus operandi is essentially the same as that of the viride.

The first inquiry which naturally presents itself is, what is the essential and characteristic difference in these two plants, which are almost if not quite identical in their botanical history, possessing in common so many physiological and therapeutical virtues, yet differing essentially in their toxical effects?

Chemistry, by the experiments of Richardson and Scattergood, reveals that they possess one alkaloid in common, the veratroida; by Simon, the existence in veratrum album of a second alkaloid, the jervina.

Bullock's experiments establish the difference be-

tween veratroida and veratria; also demonstrate the existence of a second alkaloid, the viridia in veratrum viride; whilst by mine it fully confirms the identity of the veratroida in both, and further reveals that the jervina of Simon and viridia of Bullock are probably identical; also that the essential difference resides in their resin, and that the resin of veratrum album contains an active principle, not of basic origin, which does not exist in veratrum viride.

Physiology will give the final explanation or answer by the following experiments, and conclusions to be drawn from them.

The alkaloids were either made use of in the form of acetate, or else the pure alkaloid dissolved in alcohol. I would here acknowledge my indebtedness to my friend, Dr. Sylvester Teats, for his valuable advice and assistance in making these experiments.

EXPERIMENTS WITH THE ALKALOID VERATROIDA, EXTRACTED FROM THE TWO VARIETIES.

I. I injected into the thigh of a mongrel bitch weighing twenty-one pounds, gr. $\frac{1}{10}$ of veratroida (album), P. 130, R. 26, T. 100; 20 min. vomiting and natural evacuation from bowels, 25 min. salivation and dysuria, 35 min. P. 64, salivation profuse, vomiting and dysuria; 1 hour 15 min. P. 54, R. 14, T. 98⅓, salivation continues, vomiting greenish, viscid mucus; 3 hours 35 min. running about and eats food with relish.

II. Injected into the breast of a young pigeon gr. $\frac{1}{10}$ veratroida (album), P. 159, R. 28, T. 106; 20 min., P. 136, R. 28, T. 105⅓; 25 min., nauseated and purging; 30 min., falls on side, convulsions and death.

III. Injected into the breast of a young pigeon gr. $\frac{1}{4}$ veratroida (viride), P. 162, R. 48, T. 107⅕; 6 min., vomiting and purging; 20 min., P. 180, Resp. very rapid, loss of power in wings and feet, convulsions, 23 min. dead.

IV. Injected into the breast of a young pigeon veratroida (album) gr. $\frac{1}{24}$, 8 min. nauseated and vomiting, 12 min. convulsions and death.

V. Injected in thigh of a full-grown English rabbit veratroida (album) gr. $\frac{1}{8}$, P. 147, R. 126, T. 101⅕; 25 min. P. 126, R. 19, spasmodic and irreg., T. 98⅘, quite unwilling to move; 34 min. R. 99, reg.; slight opisthotonos, loss of power in extremities, anæsthesia, does not respond when irritated. Electricity to mouth and anus either with the induced or direct currents causes reflex movements of extremities; 45 min. P. 116, T. 96⅗, convulsive movements, falls on side; 61 min. dead. Autopsy immediate. Meninges of cerebrum, cerebellum, and medulla oblongata slightly injected; spinal cord normal; heart distended; lungs normal; cortical portion of the kidneys intensely congested; liver congested; a marked redness of the mucous membrane of the large curvature of the stomach and intestines.

VI. Injected into the thigh of a large common male rabbit veratroida (album) gr. $\frac{1}{8}$; P. 160, R. 104, T. 102⅗; 10 min. violent expulsion of urine; 18 min. marked opisthotonos, followed by complete relaxation of the abdominal muscles, pulsation of heart almost imperceptible, apparently dying; administered whiskey ʒ ij. per rectum, and morphia sulph. gr. $\frac{1}{10}$ hypodermically; 7 min. P. 165, R. 27, T. 98⅓, slight opisthotonos, with drawing of head to left side; 32 min. P. 142, R. 17, T. 96⅕, complete muscular relaxation and insensibility; 1 hour 45 min. P. 182, R. 17, T. 92⅗, by mouth whiskey ʒ iss., placed near register; 1 hour 52 min. P. 163, R. 32, T. 91⅕; 4 hours 12 min. P. 160, R. 60, T. 93⅘, easily roused, but extreme prostration continues; 7 hours 32 min. P. 150, R. 52, T. 95⅗, conscious, less muscular relaxation, has partial control, and endeavors to move about; 14 hours, running about.

VII. Injected in thigh of a large male rabbit veratroida (album) gr. $\frac{1}{2}$, P. 180, R. 56, T. 103⅘; 20 min. violent expulsion of urine, slight opisthotonos; 30 min. P. 135, R. 51, T. 101⅕; convulsions increased by irritation, lies on side during intervals; 95 min. convulsions have ceased, and rapidly recovering.

The urine was evaporated, the residue treated with ether; the ether filtered, and portions allowed to evaporate on separate dishes. The one treated with sulphuric acid gave a yellow, then reddish-brown, and finally brown reaction; the one with nitric acid, an evanescent rose tinge; the last, with muriatic acid, no reaction whatsoever either before or after boiling.

VIII. Injected in thigh of a white rabbit veratroida (viride) gr. $\frac{1}{16}$, P. 180, R. 56, T. 98⅘; 45 min. P. 110, R. 42, T. 96⅗; gr. $\frac{1}{10}$ opposite thigh; 13 min. slight convulsive movements, moans, and nauseated; 38 min. P. 110, R. 32, complete loss of power, partial anæsthesia, lying on side; 48 min. P. 108, R. 28; 3 hours 37 min. P. 132, R. 20, T. below 90, lying on side, loss of power not as marked, recovery occurred in the anterior first, nor was it as marked in them; 3 hours 48 min. P. 128, R. 33, T. 92, great prostration, but muscular power restored.

IX. Injected in thigh of a large English rabbit veratroida (viride) gr. $\frac{1}{2}$; 8 min. intense dyspnœa; 11 min. marked opisthotonos; 14 min. dead.

Autopsy two hours after. A slight injection of the meninges of the cerebrum, cerebellum, and medulla oblongata, spinal cord normal, heart distended and filled with blood; stomach mucous membrane pale, a slight redness of the mucous membrane of the male intestines, congestion of liver, intense of the cortical portion of the kidneys; lungs normal.

X. Injected in thigh of a young female cat veratroida (viride) gr. $\frac{1}{8}$; 6 min. nauseated, vomiting, viscid mucus; 10 min. excited; 15 min. resp. hurried and panting, impossible to count it, tongue protruded; 20 min. moving about, intense nausea; 35 min. complete loss of muscular power, and anæsthesia; but responds perfectly to direct and induced currents. R. 122 and reg.; 50 min. resp. spas. and irreg., nauseated, and moaning; 55 min. R. 3, moans and endeavors to raise its head; 1 hour 10 min. R. 6, spasmodic and moaning; anæsthesia complete, artificial respiration kept up for 10 min.; 1 hour 30 min. R. 42, regular and full; 1 hour 35 min. when raised by tail violent movement of extremities; 1 hour 45 min. anæsthesia marked, but responds perfectly to induced and direct currents, which increase the frequency of the respiration; 3 hours R. 42 and regular, anæsthesia less marked, when irritated moves extremities. From this time the respiration gradually decreased; and it was found dead about eight hours after.

Autopsy, heart distended, slight ecchymotic spots in left lung; liver and kidneys congested.

"Dr. Perey states that he made 31 experiments on dogs with the veratroida (viride); that he found it more sedative in its effects than the veratria (sabadilla); that it was less irritant, seldom causing an increase of the pulse, which the veratria certainly did; that it produced vomiting and purging in about an equal degree; that, when a large dose was given, and prostration ensued, it was generally accompanied with a dilatation of the pupils, but this effect was not produced by small doses; that purging was seldom produced by either when given by the mouth, but nearly always when given by hypodermic injection; that doses amounting to 2 grains at a time might be given, producing alarming prostration, and most painful and protracted vomiting without causing death, if brandy, brandy and morphia, or tincture of cantharides was administered, and that in every instance the

animal's life might be saved by proper attention. When death took place it was caused by repeating the dose, and not by a two-grain dose administered at one time. Post-mortem examination revealed inflammation of the mucous membrane of the stomach, and in some cases it extended, more or less, through the whole intestinal tract, and was always seen at the rectum; the kidneys were in a state of congestion, and the heart filled with blood. That in three cases in which the veratroida was administered by hypodermic injection, the results were somewhat different:—1st case: To a dog, weighing fifteen pounds, he administered veratroida (viride) gr. $\frac{1}{3}$, P. 120; it was most freely salivated, purged once in 5 hours 40 min., P. 92. 2d case: To a dog, weighing twenty-five pounds, he administered veratroida (viride) gr. $\frac{2}{3}$, P. 116; 40 min. P. 90, very much dejected, has had a free flow of saliva; injected gr. 1 on opposite side; 42 min. purged; 55 min. P. 82, saliva flows freely, very dejected; 60 min. vomiting frequently, respiration labored, prostration very great; 1 hour 40 min. P. 70, prostration increases; then administered 2 oz. of brandy, which checked the vomiting, which was repeated twice at intervals; 17 hours 25 min. P. 170, intermittent, unable to walk steadily; recovered the next day. 3d case: Injected in a small dog, weighing about six pounds, veratroida (album) gr. $\frac{1}{4}$, P. 110; 20 min. P. 170, vomited freely, purged freely; 35 min. vomiting continuous, P. 180; 37 min. repeated the same dose on the other side; 48 min. P. 160, prostration very great, unable to stand; 1 hour 3 min. P. 80 and intermittent; 1 hour and 40 min. after the administration of the first dose he gave the dog strychnia gr. $\frac{1}{12}$, which killed it.

"Both alkaloids produced a sedative action on the pulse, but the veratria did not to the same extent as the veratroida from the viride; and neither of them to the same extent as the pure resinoid, or the tincture of veratrum viride. The prostration was more complete, alarming, and prolonged, and the vomiting more painful and continued from the alkaloids than from the other preparations named."

Prof. Horatio C. Wood of Philadelphia (*Am. Journ. Med. Sciences*, Jan., 1870), after a series of experiments made with the veratroida and viridia, extracted from veratrum by Mr. Chas. Bullock, comes to the following conclusions: that—

"Veratroida appears to be physiologically, as well as chemically, in many respects midway between viridia and veratria; locally it is more irritant than the former and less so than the latter. It possesses somewhat similar powers to the former on the heart, although to a less extent, and seems midway between the two alkaloids in its action on the nervous system and muscles, acting chiefly on the spinal centres, but at the same time appearing to impair the conducting power of the nerves and the irritability of the muscles.

"Its influence on the animal may be summed up as follows:—

"1st. Locally, it is somewhat irritant.

"2d. It is an irritant emetic, and sometimes cathartic.

"3d. It exerts no direct influence upon the brain and pupil.

"4th. It is a direct spinal motor depressant, producing death by asphyxia, and acting at the same time to some extent upon the conducting nerves and muscles.

"5th. It depresses the heart's action both in force and frequency; but the period of depression is followed by one of reaction; its primary cardiac action being independent of its spinal influence."

Prof. Wood's experiments with the veratroida were so thorough, that I did not deem it necessary to repeat them.

That the veratroida extracted from the two varieties of veratrum are identical in their physiological effects. I believe to be fully established by Experiments I. to X, inclusive, also sustained by Dr. Percy's and Prof. Wood's experiments; but in order to fully satisfy myself, I made the following experiments:—

XI. I took of veratroida (viride) in pill gr. $\frac{1}{10}$, P. 80; 15 min. P. 78; 40 min. P. 72, gr. $\frac{1}{10}$; 20 min. P. 76; 30 min., P. 72, gr. $\frac{1}{10}$; 15 min. P. 70; 30 min. P. 70, gr. $\frac{1}{10}$; 15 min. P. 76; 30 min. P. 72; 45 min. P. 70; 60 min. P. 68; 1 hour 15 min., eat a hearty lunch, with two glasses of claret; 2 hours, gr. $\frac{1}{12}$, P. 80; 38 min. P. 92; 1 hour P. 72; 1 hour 30 min. P. 80.

XII. I took of veratroida (album) gr. $\frac{1}{10}$, P. 70; 30 min. P. 72, gr. $\frac{1}{10}$; 14 min. P. 66; 30 min. P. 62; 40 min. P. 67, gr. $\frac{1}{12}$; 20 min. P. 69; 35 min. P. 64; 1 hour P. 62.

These two experiments fully confirm the identity of the physiological effects of the two alkaloids; in neither of them was there any unpleasant feeling further than a slight depression or languor; as they were made two hours after eating, I made a third experiment four hours after eating.

XIII. I took gr. $\frac{1}{10}$ of veratroida (viride), in an hour and 20 min. the pulse was not materially affected, then dined with relish, but about 3 hours after dining a feeling of depression and weakness came on, accompanied with a tingling sensation of the tongue and lips, which continued for some hours, and was exceedingly unpleasant. Amongst its toxical effects described by Percy is gastro-enteritis; that veratroida has a decided tendency to produce gastro-intestinal disturbance, there is no doubt of; but that it produces more than a passing redness, I doubt; there is not a single recorded case where veratrum viride has produced gastro-enteritis, nor a single experiment on animals in which it has had that effect. In the cases he refers to, I believe that he must have given the two-grain doses by the mouth; then it would be due to its local effect as an irritant, not to any specific action. That this effect, characteristic of veratrum album, is not due to the veratroida, I will clearly prove.

I believe that when given in fatal doses it acts as a cardiac poison; the action of which Maurice Schiff (*Impartial de Firenze*, 1870) describes as follows:—

"All poisons called cardiac end by stopping the heart at the diastole, not by a specific action, but they gradually destroy the excitability and conductive powers of the nerves of the organism."

That it may sometimes produce death by asphyxia, as suggested by Wood, I admit; but that is due to the same cause.

It is a spinal motor depressant, but I do not consider its action direct, but secondary to its action on the sympathetic through the vaso-motor nerves. That its action on the heart is through the sympathetic is shown by the experiments in which Prof. Wood divided the pneumogastrics; these experiments further show that its peculiar action on the alimentary canal is through the pneumogastric nerves, for there was no vomiting and purging except in the animals in which he had not divided the pneumogastrics.

EXPERIMENTS WITH VIRIDIA.

XIV. Injected in thigh of a dog weighing about twenty pounds gr. $\frac{1}{4}$, P. 118, R. 24, T. 101$\frac{1}{5}$; 30 min. no perceptible change, injected gr. $\frac{1}{4}$ in opposite thigh; 35 min. P. 90, R. 26, T. 100$\frac{1}{5}$, inj. gr. $\frac{1}{2}$; 25 min. P. 114, R. 28; 40 min. gr. $\frac{1}{2}$ by mouth; 30 min. P. 97, R. 40. T. 101$\frac{1}{5}$; 3 hours, P. 126, R. 28, T. 101$\frac{1}{5}$, gr. 1, by

mouth; 30 min. P. 113, R. 28, T. 101; 50 min. P. 90, R. 20; 60 min. P. 102; 1 hour 15 min. P. 100; 2 hours 30 min. P. 114.

In about six hours 2½ grains were administered, the temperature was not affected, and the pulse and respiration not materially influenced; the animal did not seem to feel any discomfort.

XVI. Injected into the breast of a young pigeon, gr. $\frac{1}{4}$, P. 164, R. 40, T. 107½; 45 min. P. 152, R. 34, T. 104½, inj. gr. ¼; 7 min. slight opisthotonos; 20 min. P. 140, R. 36, T. 104, moves about with rapid flapping of wings; 60 min. P. 113, R. 30, T. 101½, quiet, rests on feet, a general tremor if disturbed; 2 hours 45 min. has entirely recovered.

XVII. Injected in breast of young pigeon gr. ¼; 5 min. general tremor; 7 min. vomits corn, 13 min. flapping of wings and twitching of tail; 17 min. violent opisthotonos; 53 min. tetanic convulsions have been almost continuous, lying on back; 1 hour 5 min. convulsions less violent, no change in pupil; 1 hour 10 min. dead.

XVIII. Injected gr. $\frac{1}{8}$ in breast of young pigeon, P. 164, R. 84, T. 107; 10 min. P. 160, violent flapping of wings; 25 min. tetanic convulsions; 1 hour 8 min. P. 160, convulsions continuous, pupil contracted; 1 hour 28 min. lying on back, convulsions not as violent; 1 hour 53 min. died in hand.

XIX. Injected in breast of young pigeon gr. ¼, P. 163, R. 120, T. 107⅔; 2 min. vomiting; 9 min. violent flapping of wings; 13 min. P. 156, T. 108⅔; 23 min. violent tetanic convulsions, lies on back; 1 hour 25 min. dead

The autopsies, with the exception of contracted hearts, revealed nothing.

XX. Injected in thigh of a female rabbit in poor condition gr. ¼, P. 147, T. 102½; 20 min. P. 132, T. 98⅔; 60 min. P. 138, R. 48, T. 102½, injected gr. ¼; 20 min. P. 136, R. 37, T. 98⅔, 50 min. P. 132, R. 43, T. 95; 1 hour 20 min. P. 124, R. 35, T. 95½; 3 hours, P. 150, R. 69, T. 97.

XXI. Injected in thigh of a male rabbit gr. ¼, P. 152, R. 76, T. 100⅘; 30 min. P. 157, R. 86, T. 103, injected gr. ¼; 26 min. P. 130, a general tremor followed by a partial loss of power, more marked in anterior extremities; rapid movement of the ears, with violent contraction of extremities; 41 min. salivated, grinding of teeth; 1 hour 6 min. P. 144, marked opisthotonos; 2 hours 6 min. convulsions have ceased; 2 hours 10 min. P. 160, R. 41, T. 99⅘, and runs about.

XXII. I took gr. ¼ dissolved in acidulated water, at the end of one hour, no perceptible effect.

XXIII. I took gr. 1 in capsule. P. 64; 25 min. P. 78; 35 min. P. 64; 55 min. P. 64; 60 min. drank a small glass of ale; 70 min. P. 64; there was no other effect perceptible, unless a pleasant muscular exhilaration and tension.

Not one of these experiments responds exactly to the results obtained by Prof. Wood, or to those of the exhausted resinoid of Drs. Percy and Oulmont; the latter's was prepared by Fluckiger, of Berne.

As to its action on the circulation, the results were almost if not entirely imperceptible; it had a slight action on the respiration, but its action was more decided on the temperature; however, none sufficiently pronounced to warrant its recommendation as a therapeutical agent.

Its action may be summed as follows:—

I.—It is not locally irritant.

II.—It has no decided action on the alimentary canal.

III.—It exerts no direct influence on the brain; although there is occasionally a slight contraction of the pupil.

IV.—It is not a spinal motor depressant, but a spinal motor excitant; in large doses producing on animals effects similar to small doses of strychnine.

Owing to the accidental loss of nearly all my alkaloids, I was unable to investigate the action of the jervina of veratrum album as thoroughly as I should have desired to, but as its chemical reactions are identical with those of viridia, and the experiments made, with three exceptions, produced results similar to those of viridia, I must incline to consider them identical.

EXPERIMENTS WITH JERVINA.

XXIV. Injected in breast of a young pigeon gr. ¼, P. 180, R. 80, T. 107⅕; 20 min., general tremor, vomits corn; 55 min. P. 180, R. 76, T. 105⅔, vomiting corn; 66 min. P. 178, R. 80, T. 106, injected gr. ¼; 30 min., P. 156, R. 18, T. 101, pupils contracted; 1 hour 10 min., P. 170, R. 30, T. 98⅗; found dead 12 hours after.

XXV. Injected in breast of young pigeon gr. ¼, P. 154, R. 140, T. 109⅔; 2 min. vomiting corn; 12 min. P. 156, general tremor, violent flapping of wings, vomiting corn; 25 min. P. 172, R. 156, T. 109, marked tetanic convulsions; 45 min. P. 156, R. 176, T. 109, convulsions continuous, lies on back and side during interval; 1 hour 30 min. P. 160, convulsions continuous. Died in hand.

XXVI. Injected in breast of a young pigeon gr. $\frac{1}{8}$; 29 min., no change; injected gr. $\frac{1}{8}$; 7 min., vomits corn, staggers; 9 min. violent flapping of the wings, loss of power in feet; 12 min. marked tetanic convulsions; 4 hours 57 min. died: tetanic convulsions, with occasional remissions, had been continuous.

XXVII.–VIII.–IX. In the breast of three young pigeons I injected gr. ¼ each; there was no apparent effect produced. They died at intervals varying from 18 to 24 hours.

In the autopsies of the last three there were clots of blood at the point of injection, otherwise the autopsies of all were as negative as those killed by viridia.

XXX. Injected in thigh of a dog gr. ⅓; there was no apparent effect.

XXXI. Injected in the same dog jervina, containing a trace of veratroida, gr. $\frac{1}{100}$, P. 120, R. 20, T. 100⅘, 30 min., P. 90, R. 20, T. 100⅘. gr. ⅛, 30 min. P. 96, T. 102⅔; administered gr. ⅓ by mouth; 15 min. P. 134. Vomiting yellow mucus; pupils dilated, eyes fixed and staring; he recovered in a short time.

This last experiment is of special interest, for it demonstrates the importance of fully separating the alkaloids; it also serves to explain the cause of the fallacy of Prof. Wood's conclusions from his experiments with Bullock's viridia.

This investigation would be incomplete, for the experiments on myself fail to demonstrate that the powerful sedative action of veratrum resides in the veratroida, were it not that the explanation of it is facile and conclusive.

Scattergood, Percy, and Oulmont found that the exhausted resin of veratrum viride possessed a greater sedative action than the veratroida. Percy called it resinoid; because he thought that it was a complex body, containing a distinct alkaloid. Wood, also, found that the viridia of Bullock possessed a similar power. Bullock has demonstrated that another alkaloid, the viridia, can be extracted from this resinoid by means of acetic acid, for that acid separates the alkaloids from the combined state in which they naturally exist, which neither muriatic nor sulphuric acids have the power of doing, and that is the cause of Scattergood's,

Percy's and Oulmont's failure. I do not believe that the viridia furnished to Professor Wood by Mr Bullock was entirely free from veratroida. Either the evaporating or sulphuric acid tests should be tried whilst separating them, and if they fail to give any response it is proof positive that the veratroida has all been extracted; but what is conclusive to my mind is that he found that the two alkaloids were identical in their reactions, whilst I have shown them to be distinct.

Therefore I conclude that the experiments of Percy, Scattergood, and Oulmont with the so-called resinoid, and Wood's with Bullock's viridia, demonstrate the physiological effects of the combined alkaloids. Consequently I believe that the following conclusions of Prof. Wood do not apply to the physiological effects of viridia, but to those of the combined alkaloids, for I have shown that the viridia is inert as a sedative, and will prove the accuracy of my assertion by experiments.

Wood concludes as follows:—

1st. It appears to be slightly, if at all, locally irritant.

2d. It has no action whatever on the alimentary canal, never producing either vomiting or purging.

3d. It exerts no direct influence upon the brain, and the pupil is not affected by it, except an indirect dilatation, just before death.

4th. It is a spinal motor depressant (probably directly so), producing death by paralysis of the respiratory nerve centres, and is without influence on the muscles or nerves.

5th. It is a direct depressant to the circulation, lowering the force and rapidity of the blood streams, slowing the action of the heart, and finally affecting the force of the single beat, independent of any action it may exert.

The following experiments with the combined alkaloids I consider conclusive.

XXXII. I took of veratroida (album) gr. $\frac{1}{60}$, and of viridia (viride) gr. $\frac{1}{6}$. dissolved in water acidulated with acetic acid; P. 80; 10 min. P. 70; 25 min. 68; 40 min. P. 70, took of veratroida (album) gr. $\frac{1}{300}$, of viridia (viride) gr. $\frac{1}{6}$; 20 min. P. 66; 30 min. P. 64; 40 min. P. 62; 50 min. P. 66; 60 min. P. 68; 1 hour 50 min. P. 80.

XXXIII. A similar experiment was tried with the veratroida (viride) and the viridia (viride) combined with similar results.

XXXIV. Injected in the thigh of a bitch weighing 22 pounds, of veratroida (viride) gr. $\frac{1}{16}$, and of viridia (viride) gr. $\frac{1}{5}$, P. 120, R. 40, T. $100\frac{1}{5}$; 30 min. P. 92, R. 42, T. 101; 40 min. P. 90, same quantity of each injected in other thigh; 7 min. vomiting viscid mucus and purging; 15 min. resp. panting, and frequent tongue protruded; 30 min. P. 50, R. 14; lying quietly, no loss of muscular power, moves about when disturbed, no nausea and urinating; 1 hour P. 44, R. 16, T. 98; 1 hour 15 min., lying quietly, and when disturbed rises; but the effort induces nausea, and vomits viscid mucus; 1 hour 45 min. P. 46, R. 16; 2 hours 45 min. P. 42, T. 96; 12 hours, the dog was as well as ever; she did not have, any time, any loss of power or anæsthesia. The urine she voided was evaporated, the residue treated with ether, the ether filtered, and allowed to evaporate; the residue, which was imperceptible to the naked eye, when treated with sulphuric acid gave a yellow, then a reddish-brown, and, finally, a brown reaction.

EXPERIMENTS WITH THE RESINOID OF VERATRUM ALBUM, ITS RESINOID EXHAUSTED BY ETHER, ITS ETHEREAL EXTRACT, AND THE ORGANIC PRINCIPLES SEPARATED BY AMMONIA AND LIQUOR POTASSA.

Experiment with resinoid V. album:—

XXXVIII. Injected in the thigh of a large gray rabbit gr. $\frac{1}{10}$, P. 141, R. 154, T. $102\frac{1}{5}$; 30 min. P. 180, R. 135, T. $100\frac{1}{5}$, gr. $\frac{1}{100}$; 25 min. P. 165, R. 130, T. 101; 45 min. inj. gr. $\frac{1}{50}$; 10 min. P. 180, R. 63, T. $99\frac{3}{5}$, relaxed sphincter, partial loss of power in posterior extremities; 1 hour 15 min. P. 165, R. 54, T. $99\frac{3}{5}$, total loss of power in extremities; 2 hours 15 min. gradual recovery of power in anterior extremities; 4 hours 15 min. entirely recovered.

XXXIX. Same rabbit as last, 48 hours interval; injected gr. $\frac{1}{25}$, P. 183, R. 180, T. $102\frac{1}{5}$, 25 min. salivated and nausea; 50 min. P. 153, R. 75, T. $100\frac{2}{5}$. quiet, but moves when disturbed, refuses food, partial loss of power in posterior extremities, and dropping of tail, gr. $\frac{1}{25}$; 20 min. P. 174, R. 159, T. $98\frac{4}{5}$, dropping of ears, a general tremor, when excited tries to move, but is unable to do so, dropping on left side posteriorly; 1 hour, P. 157, R. 90, T. $99\frac{2}{5}$, complete loss of power below neck, sight and hearing unimpaired, no anæsthesia, when irritated, reflex movements of posterior extremities, gr. $\frac{1}{25}$; 1 hour 10 min. P. 168, R. 44, T. $95\frac{3}{5}$, perfectly conscious, almost total loss of muscular power, contractions respond, but not permanent, gr. $\frac{2}{25}$; 1 hour 25 min. P. 144, R. 48, T. $97\frac{4}{5}$. drops chin on table, when roused raises head; 2 hours, P. 138, R. 40, T. $96\frac{1}{5}$, lies on side, when disturbed endeavors to move, but can only raise its head, respiration spasmodic, gr. $\frac{2}{25}$. 1 hour 5 min. P. 168, R. 35, complete loss of muscular power, no anæsthesia, slight reflex movements; 8 hours 50 min. P. 144, R. 100, T. 100, lies on belly, gradual recovery of muscular power, more marked in anterior than posterior extremities, tries to walk, but unable to do so, takes food; 19 hours, apparently as well as ever.

XL. Injected in the thigh of a large black cat gr. $\frac{1}{10}$; 21 min. nauseated, and vomiting viscid mucus; 40 min. R. 96, vomiting continuous; 1 hour 20 min. excited, vomiting has ceased; 1 hour 35 min. great excitement, followed by prostration, resp. hurried, 210; 2 hours, quiet, inclined to sleep; 3 hours 30 min. still nauseated, partial loss of muscular power; 9 hours 40 min. moans when disturbed, has had two evacuations from bowels but no purging, great prostration, loss of power more marked in posterior extremities; 20 hours 30 min. very much prostrated, no nausea or purging, refuses food and drink; 23 hours 43 min. P. 150, no marked change, gr. $\frac{1}{10}$; 37 min. excited and moans, R. 51 to 20; 1 hour, nausea and vomiting, convulsive movements, followed by apparent narcotism; 1 hour 20 min. complete anæsthesia, but responds perfectly to direct and induced currents; if one of the poles is applied to either ear, it endeavors to remove it with corresponding paw, gr. $\frac{1}{5}$; 27 min. 25 hours and 30 min. after the first injection I exposed the trachea, introduced the tube of the bellows; opened thoracic and abdominal cavities; marked turgescence of mesenteric vessels, intense redness of intestines, heart pulsating slowly and irregularly; 35 min. slight convulsive action, heart stopped pulsating 5 min. 12 seconds after the stoppage of the artificial respiration; liver and kidneys normal, thickening and contraction of the intestines; intense injection and redness of the gastro-intestinal mucous membrane, more marked in last six inches of the small intestine, with clots of extravasated blood on its surface.

XLI. Injected in thigh of a large female cat gr. $\frac{1}{5}$, 6 min. R. 22; 15 min. salivated and moans, intense nausea, and vomited a partially digested rat, quite excited; 25 min. R. 210, and panting; lies on side; 30 min. complete anæsthesia, and loss of muscular power; but responds perfectly to direct and induced currents; 40 min. violent convulsions; 43 min. dead. Autopsy

immediate; meninges of cerebrum, cerebellum, and medulla oblongata injected; heart distended; frothy mucus in bronchial tubes; ecchymotic spots on the surface of both lungs; lungs readily inflated; liver and kidneys normal; marked redness and congestion of mucous membrane of the stomach, of last six inches of the small intestine, and intense from ileo-cæcal valve to anus. In this as well as in the preceding case there was a contraction of the intestines, a remarkable dryness of the lower portion; the upper portion was filled with bile.

XLII. Gr. ¼ injected in the thigh of a young cat, caused death in 2 hours 6 min.

XLIII. Gr. ¼ injected in thigh of a kitten three months old, caused death in 30 minutes.

XLIV. Gr. ¼ in thigh of a rabbit, caused death in 1 hour and 3 minutes.

In these three cases the symptoms produced were similar to the others, and the congestion of the gastro-intestinal mucous membrane varied in intensity as to the length of time it took to cause death.

EXPERIMENTS WITH THE RESINOID EXHAUSTED BY ETHER.

XLV. Injected in thigh of a slut weighing 22 pounds gr. ½, P. 120, R. 25, T. 101; 15 min. gr. ½, 45 min. vomiting frothy mucus, tenesmus and strangury; 2 hours 45 min. P. 66, loss of power in posterior extremities; salivated and moans; 3 hours 5 min. P. 86, tries to walk, but staggers and falls; 4 hours 35 min. lies on side, cannot rise, has urinated freely; 5 hours 35 min. P. 160, great prostration; 7 hours 35 min. slight anæsthesia, cannot walk, but crawls; 9 hours 5 min. P. 146, R. 32, T. 95, has had two small alvine evacuations; 18 hours, vomited freely during the night, great prostration, refuses drink and food, crawls from one spot to another; 42 hours, salivation, marked prostration, moans incessantly, and vomits frothy mucus at intervals; 50 hours 40 min. convulsions, opisthotonos, has vomited blood twice since morning; 50 hours 42 min. muscular rigidity, heart has ceased pulsating, vomits blood; 50 hours 50 min. dead.

Autopsy one hour and 30 minutes after death: heart distended; right lung congested, and ecchymotic; both lungs readily inflated; liver congested and dark; kidneys normal, ureters also; intense redness and injection of the mucous membrane of the bladder, also that of the uterus; thickening of the stomach and intestines, also a contraction of the lower portion of the small intestine, not as marked in large; intense hyperæmia of the gastro-intestinal mucous membrane, more marked in stomach and large intestine; a remarkable dryness of the lower portion of the small intestines. To the naked eye, the mucus presents the appearance of gastro-interitis; there are here and there among the folds spots of ecchymosed blood; with the aid of a powerful glass, the smallest vessels appear to be very much enlarged and filled with dark blood; by the microscope, Prof. Alonzo Clark failed to find any evidences of inflammatory action in the stomach, rectum, uterus, or bladder.

XLVI. Injected in the thigh of a dog, weighing about eighteen pounds, gr. ½, P. 132, T. 102⅔; 7 min. resp. panting 120; 20 min. P. 40, T. 101⅔; great prostration, unwilling to move but conscious; 40 min. P. 39, T. 96½, salivated; 45 min. nausea and vomits viscid yellow mucus; 1 hour 5 min. has vomited several times, slight evacuation from the bowels, great prostration and moans; 2 hours 15 min. P. 34, T. 92, turns from one side to the other; 2 hours 45 min. P. 56, T. 93, moans, prostration not as marked, has not vomited since last observation; 5 hours 25 min. P. 54, T. 96⅔, vomiting frothy white mucus; 7 hours 15 min. P. 88, T. 97⅔; 8 hours 50 min. P. 96, T. 99½, prostration not as marked; 12 hours 20 min. P. 124, T. 100½, quite active, eats food and drinks with relish; 12 hours 45 min. gr. ½ in opposite thigh; 9 hours, P. 136, T. 91½, almost total loss of power in posterior extremities, vomited freely during the night, great prostration, and moans; 13 hours 35 min. P. 100, R. 19, T. below 90, almost complete anæsthesia, extreme prostration, slight reflex movements when disturbed, respiration sighing; 14 hours 15 min. R. 2, P. 88, injected strychnine gr. $\frac{1}{12}$, resorted to artificial respiration; 10 min. strychnine gr. $\frac{1}{12}$; 10 min. P. 100, R. 11, strychnine gr. $\frac{1}{12}$; 10 min. P. 84, R. 12, strychnine gr. $\frac{1}{12}$; 15 min. convulsion, emprosthotonus; 30 min. has had four convulsions; 35 min.—25 hours 5 min. since first injection of resinoid; 1 hour 5 min. since first injection of strychnine, died; respiration ceased before heart. Autopsy one hour after: both lungs most distended; congested, ecchymotic spots on surface, liver congested; intense injection of the mesenteric and gastro-intestinal vessels, also of supra-renal capsules and vesical vessels. The condition of the mucous membrane of the stomach, intestines, and bladder was the same as in Experiment XLV.; the substance of the kidneys was intensely congested; in the pelvis of both there were some clots of blood.

XLVII. Injected in breast of young pigeon gr. $\frac{1}{12}$, P. 174, R. 72, T. 107; 5 min. unable to fly; 7 min. vomiting corn; 25 min. P. 160, R. 21, T. 105⅘, lies on abdomen; 35 min. P. 154, R. 52, T. 101⅕; 1 hour 38 min. vomiting corn, lies on side; 2 hours 35 min. P. 142, R. 8, T. 96; walking about, but cannot fly; 9 hours 55 min. 172, R 40, T. 102, convalescing, vomited once since last observation; 17 hours, nothing abnormal, vomited freely during the night.

XLVIII. Gr. $\frac{1}{16}$ injected in breast of young pigeon caused death in 10 minutes.

XLIX. Gr. $\frac{1}{16}$ in the breast of old pigeon caused vomiting, complete anæsthesia, conscious when head was disturbed, and died some hours after.

L. Gr. $\frac{1}{16}$ in breast of young pigeon caused death in 42 minutes.

In these three experiments the hyperæmia varied in intensity according to the length of time it took to cause death; and in all of them the gastro-intestinal canal was filled with bile.

EXPERIMENTS WITH THE PRINCIPLE SEPARATED BY AMMONIA.

LI. Injected in the thigh of a rabbit gr. ½, P. 171, R. 140, T. 101⅕; 40 min. P. 150, R. 144, T. 102⅕, 1 hour 30 min. P. 180, R. 144, T. 101⅕, gr. ½; 90 min. P. 153, R. 116, T. 103⅗. Loss of power in extremities more marked in posterior, grinding of teeth, when aroused turns from side to horizontal posture, nausea, moaning cry, when irritated violent reflex movements of posterior extremities, gr. ¼; 5 hours 50 min. P. 189, R. 24, T. 99⅘, lies on belly, loss of power more marked in the anterior extremities, if they are pulled, cause violent reflex movements of the extensors of the posterior ones, gr. ½; 7 hours 30 min. P. 130, R. 44, T. 97⅖; lying on belly, partial loss of power, violent reflex movements when irritated; 16 hours 30 min. convalescing; 40 hours after first injection, apparently as well as ever.

LII. Injected in breast of young pigeon gr. $\frac{1}{36}$; P. 156, R. 64, T 108⅕; 20 min. P. 210, R. 37, T. 106, partial loss of power in feet and unable to fly; nauseated; 1 hour 4 min., P. 188, R. 58, T. 103; recovering power, pupil contracted, gr. $\frac{1}{36}$; 58 min. lying on side, complete anæsthesia, but responds to direct and induced currents when applied to tongue and

anus, viscid mucus flowing from mouth; 2 hours 50 min. P. 160, R. 37, T. 103⅕; complete loss of power, pupil dilated, flow of mucus continues; 7 hours 30 min. P. 155, R. 20, T. 98¾; flow of mucus persistent, slight purging, lies on side, loss of power not as marked; 6 hours 50 min. found dead.

LIII. Injected in breast of old pigeon gr. $\frac{1}{16}$; P. 170, R. 52, T. 108; 6 min. vomiting corn; 10 min. complete loss of power, lies on side; 20 min. P. 168, R. 98; 24 min. resp. spas. and dies.

LIV. Injected in breast of an old pigeon gr. ¼; 6 min. attempts to vomit; 7 min. falls dead.

In the autopsy of the first and second pigeons, the same changes were noted as in those in which death had been caused by the resinoid.

EXPERIMENTS WITH THE PRINCIPLE SEPARATED BY LIQUOR POTASSA.

LV. Injected in thigh of a large female rabbit gr. $\frac{1}{12}$, P. 180, R. 165, T. 102⅖; 1 hour P. 159, R. 144, T. 102⅖, gr. $\frac{1}{12}$; 50 min. P. 178, R. 150, T. 103⅗, gr. $\frac{1}{12}$; 35 min. P. 154, R. 174, T. 104⅕, gr. ⅓; 40 min. P. 150, R. 120, T. 104⅘, gr. ⅙; 2 hours P. 150, R. 120, T. 104⅘, gr. ⅙; 2 hours 45 min. P. 180, R. 160, T. 106; 13 hours 30 min. P. 201, R. 90, T. 103¾, gr. j. by mouth; 10 min. nauseated; 1 hour, P. 160, R. 31, T. 106; 2 hours 20 min. P. 170, R. 61, T. 106⅝, gr. ½ dry powder blown into the throat; a portion probably entered the larynx; 1 hour 25 min. T. 105¾; 4 hours 25 min. T. 104⅘, eats food with relish; 8 hours 25 min. T. 105½; 27 hours 25 min. P. 150, R. 48, T. 103⅕, dyspnœa, resp. wheezing, abdomen distended, tympanitic; 51 hours, P. 183, R. 36, T. 103¼; quite active, dyspnœa more marked; a wheezing during expiration, apparently from trachea or larynx, injected gr. $\frac{1}{10}$ of resinoid; 5 min. salivated, 10 min. violent opisthotonos and death. Autopsy immediate; larynx normal, inflammation of the trachea and right bronchus, with exudation of false membrane, lungs normal, heart filled with blood, liver congested, kidneys normal, intense redness and injection of the peritonæum, intestines distended with gas. The opisthotonos had been so violent that there was a rupture of the right psoas.

EXPERIMENTS WITH THE ETHEREAL EXTRACT.

LVI. Injected in breast of young pigeon gr. $\frac{1}{12}$, P. 174, R. 76, T. 107; 7 min. vomiting grain; 33 min. P. 102, R. 54, T. 105⅔; 38 min. vomiting; 1 hour 38 min. P. 122, R. 22, T. 102½, complete loss of power of wings and feet, if placed on back unable to turn, gr. $\frac{1}{12}$; 25 min. marked contraction of pupil; brain apparently unaffected, P. 148, R. 42, T. 100⅝; 1 hour 50 min. P. 112, R. 18, T. 100; total loss of power, eyes closed, but opens them when roused, pupils contracted, complete anæsthesia; 5 hours 22 min. P. 143, R. 25, T. 100, pupils normal, able to stand; 15 hours, apparently well, flies about.

LVII. Injected in breast of young pigeon gr. ¼, P. 150, R. 56, T. 105½; 12 min. P. 152, R. 72, T. 100⅓, partial loss of power, lies on side, pupils contracted; 34 min. P. 176, R. 64, T. 96⅔, complete loss of power, and anæsthesia, purging; 1 hour 29 min. P. 170, R. 64, T. 96⅔, eyes closed, but opens them when roused, fluid oozing from mouth; 8 hours, P. 144, R. 102, T. 96⅓; complete anæsthesia, conscious, purging; 9 hours 15 min. P. 150, R. 126, T. 97¼, can now stand on feet and run around with but little difficulty.

These experiments confirm the chemical analysis of the resinoid (album). Experiments XXXVIII. to XLIV., inclusive, give the following results: 1st. Vomiting, purging, and salivation. 2d. Depression of the circulation, respiration and temperature. 3d. Loss of muscular power and complete anæsthesia, without paralysis. 5th. When given in fatal doses it caused death either by asthenia, or asphyxia in the same manner as the veratroida. 6th. The autopsies revealed the most intense hyperæmia of the gastro-intestinal mucous membrane.

Exp. XLV. to LIV., with the resinoid deprived of its ethereal extract, with the exception of the anæsthesia, gave absolutely the same results; these also include the Exp. with the principle separated by ammonia. Exp. LV., with the organic principle separated by liquor potassa, the result varied essentially in the remarkable rise of the temperature from 102⅛° to 106°, its falling and rising again to 106⅔ when an additional dose was given; the tracheitis and peritonitis could not account for it, as they developed themselves some time afterwards.

Exp. LVI. to LVII., with the ethereal extract of the resinoid, demonstrate that it has the powerful anæsthetic and sedative action of the resinoid, without its characteristic action on the gastro-intestinal mucous membrane; hence physiologically as well as chemically the resin of veratrum album is probably a complex body, containing a distinct principle not of basic origin; the principle separated by liquor potassa is the result of a chemical change; therefore the resinoid is the veratrine proper.

Several experiments were made with the resin of the exhausted root of veratrum viride, also with the tincture, and they more than confirmed Wood's experiments and conclusions as to its complete inertness, for in pigeons it did not even prove emetic or cathartic, whether administered by the mouth or hypodermically.

It is therefore in the resinoid or veratrine of veratrum album that resides the essential and distinct difference between the two varieties of veratrum.

As a result of these researches I conclude that:—

I. They confirm the views of Richardson and Scattergood as to the identity of the veratroida in both.

II. They confirm the views of Bullock as to the veratroida's being distinct from the veratria (sabadilla).

III. They confirm the existence of Simon's jervina in veratrum album, and of Bullock's viridia in veratrum viride, and further tend to establish the chemical and physiological identity of both.

IV. They establish that Simon was probably mistaken as to the existence of baratyna in veratrum album; for in exhausting the root a large amount of lime is extracted by the acetic or phosphoric acids, and held in solution in the form of acetate or phosphate, and the addition of sulphuric acid will precipitate it in the form of sulphate, which is insoluble; in case the sulphates are used to precipitate the lime, the acetates or phosphates of ammonia, magnesia, potassa, or soda are formed and held in solution.

V. The veratroida is the active sedative principle of veratrum viride, and Bullock and Wood were mistaken in asserting that it was the viridia.

VI. That the combination of the two alkaloids as they exist in their natural state or artificially combined is the most reliable and decided method of obtaining the therapeutical virtue of either veratrum album or viride, as shown by the experiments of Scattergood, Percy, and Oulmont, with the resinoid of veratrum viride; also Bullock's and Wood's with the combined alkaloids, confirmed by my own.

VII. The essential and characteristic differences between the varieties of veratrum reside in the resinoid of veratrum album, and the characteristic action of that plant on the alimentry canal is due to it.

VIII. In order to obtain the most active root, great care should be taken in selecting it; the time of gathering it is essential in both, for in extracting the alkaloids from two pounds of powdered veratrum album, purchased from a German importer, I obtained but two grains of veratroida, not a trace of jervina, an abundance of earthy salts, and a resin almost inert. I did not find two specimens out of five to yield the same result; this accounts for the discrepancy between the views of such high authorities as Pereira, Christison, and others and mine, as to the constant effect of veratrum album; for I maintain that if it has been collected at the proper season, and has not deteriorated by keeping, and is either given in substance or its active principles are administered, it will invariably cause vomiting, purging, great prostration, and gastro-intestinal hyperæmia; in many cases gastro-enteritis will ensue as a secondary result. These effects of course vary with the amount taken.

In case the tincture of veratrum viride or its fluid extract is preferred the rootlets should be separated, as they probably contain less of the alkaloids. As the tincture or fluid extract of veratrum album would contain the veratrine or resinoid, the obnoxious principle, it would be necessary to extract the alkaloids and make use of them.

IX. In cases where alarming symptoms manifest themselves, the basis of the treatment should consist of stimulants, rubefacients, and opiates. In poisoning by veratrum album, the gastro-intestinal hyperæmia should be early overcome by the tincture of cantharides, as suggested by Percy in reference to the dilatation of the capillaries, general and local electrization, and the early use of warm enemas to wash away the effused blood and mucus.

X. The presence of the alkaloids can be detected in the urine.

THE VALLEY OF SAN RAFAEL,

A CALIFORNIAN HEALTH RESORT.

By H. A. DUBOIS, Ph.B., M.D.

Importance of a Sanitarium with a similar Climate to that of the Riviera—Climate of the Latter—Early History of San Rafael—How reached—Situation—Protection afforded by Mountain Ranges—Its Climate—Rainfall—Winds—Temperature—Table of Temperature for Nine Months—In what Respect the Climate of San Rafael resembles that of Mentone—Wherein it differs—Scenery of either Place—To what Class of Cases the Climate is adapted—Phthisis—Bronchitis—Debility—Advantages of the warm, and very cold Climates in these Diseases—Diseases not suited to the Climate—Society—Accommodation—Modes of Travel to and from.

There are a large number of persons in all the Eastern States who are compelled to seek other climates in order to prolong their lives, or to regain their accustomed health. To many of these the South of France furnishes the desired climate, while others brave the more severe season of Minnesota, or yield themselves to the softer air and milder climate of Florida. If it is a fact that there are many thousands of invalids scattered through all our Eastern and many of our Western States who must leave their homes, at least for a time, it becomes a matter of importance to the profession, as well as to this class of invalids, that there should be a sufficient number of "health-resorts," and that definite and accurate information should be attainable as regards their climates, so that the medical attendant may prescribe the climate as he would other therapeutic agencies. When this has been done, and the profession at large have availed themselves of the information, we shall probably find fewer cases of phthisis in its latter stages—accompanied with hemorrhage—sent to the bracing, and to them fatal, air of Minnesota. It is probable, also, that while many cases will be ordered a change of climate that are now treated at home, many other patients in the last stages of their disease will be allowed to die amidst their friends, who now have none but strangers to close their eyes. Could the hotels and cottages of our health resorts their tales unfold, it is to be feared that they would not be to the honor of the profession, at least on this point. The climate of the eastern and especially of the western Riviera, as the coast of the Mediterranean from Nice to Lucca is called, presents perhaps more advantages to the majority of the cases usually sent from home than most of the other health resorts on the continent of Europe. Doctor Henry Bennet some years ago published an interesting work under the title of "Winter in the South of Europe." In this he gives many facts of interest in regard to the climate of Mentone, Nice, Cannes, etc., and furnishes moderately complete tables of temperature for the first-named place. I propose to make use of many of his facts in this article, and to compare with their aid the climate of the valley of San Rafael with that of the Riviera Portente.

San Rafael.

The "Jesuit fathers," in their early settlements on the Pacific coast, displayed no inconsiderable knowledge of botany, as well as of other sciences. We find that the fruits and flowers of their planting are those best adapted, as a general rule, to the locality chosen. San Rafael was selected as a mission, I believe, as late as 1825, and is said to have been used by them as a sanitarium, to which they resorted when sick or broken down in health. It has borne this character for many years among the native Californians, and from a three years' residence I believe that in the main it is just. The village of San Rafael lies in the valley of the same name, and owing to the large number of invalids and others yearly resorting to it, is rapidly growing, and consists at the present time of perhaps 1,000 inhabitants. It is some twelve miles from San Francisco, and is reached by steam to San Quentin every few hours, and thence by rail; the time being a little over an hour. This fact, the beauty of the scenery, and its reputation for healthfulness, have caused many business men, merchants and others, to make it their permanent home, while they daily transact their business in the city. This, then, creates one, often of the most important of the adjuncts to climate in the cure of disease, viz., pleasant society.

If now we examine the situation of this valley, we will find that it lies in a direction nearly east and west, and that commencing at San Quentin, four miles to the south-east, a range of low mountains extends along its southern side, while from Point San Pedro, some five miles to the east, another series of foothills bounds its northern border, and, approaching the first, forms a *puerta luelo*, or gate of entrance; a second entrance to the valley is found on the north.

The eastern side is open, and covered with a salt sedge for several miles, to the bay of San Pablo. If we remember that the ocean lies to the west and the bay of San Pablo or of San Francisco to the east, and that the valley is shut out from the former by mountain ranges of considerable height, with Mount Tamalpais towering above them some 3,000 feet, we shall see that it is protected from the prevailing trade-winds. The north-west wind, coming from the north overland, is dry, and would reach the valley in full force, were it not for the most part broken by mountain ranges, and thus passes

TEMPERATURE OF SAN RAFAEL, CALIFORNIA,

COMPILED FROM RECORD KEPT AT THE TAMALPAIS HOTEL,

For Nine Months of the Year 1871.

	MAY.					JUNE.					JULY.					AUGUST.				
	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.
1	60	62	64	67	7	59	66	66	62	7	65	73	75	74	9	64	71	79	78	15
2	64	71	78	77	14	60	62	62	60	2	65	71	76	76	11	65	70	76	74	11
3	64	69	72	68	8	62	66	69	65	7	65	73	73	73	8	66	72	79	77	13
4	58	62	63	58	5	65	72	76	74	11	63	70	76	70	13	62	70	78	74	16
5	56	57	58	51	7	67	78	83	80	16	67	73	74	72	7	63	71	78	73	15
6	57	60	61	59	4	69	78	83	83	14	64	69	74	72	10	61	69	74	67	13
7	59	62	61	58	4	66	72	76	72	10	63	69	74	71	11	62	69	73	70	11
8	58	63	62	58	5	61	67	72	71	11	58	64	66	62	8	62	68	74	70	12
9	58	63	63	59	5	64	71	78	71	14	64	67	68	66	4	61	67	72	72	11
10	56	58	59	58	3	62	67	76	67	14	61	66	71	68	10	61	68	72	70	11
11	56	61	61	58	5	59	63	66	62	7	63	66	68	66	5	60	67	69	69	9
12	57	63	63	60	6	63	68	71	68	8	63	68	68	67	5	61	67	71	67	10
13	61	67	68	64	7	61	68	68	54	14	62	68	70	68	8	58	65	71	68	13
14	62	69	69	65	7	62	67	67	66	5	65	70	75	72	10	66	67	71	70	4
15	60	61	61	61	0	61	68	74	74	13	67	76	80	77	13	62	67	73	72	11
16	59	61	62	59	3	68	77	81	78	13	60	68	70	70	10	62	68	70	66	8
17	58	60	60	59	2	64	66	69	69	5	58	68	75	75	17	64	70	76	75	12
18	59	64	65	60	6	63	70	80	81	18	63	70	74	73	11	68	77	83	82	15
19	61	67	71	66	6	72	67	68	67	5	62	69	71	67	9	62	68	74	72	12
20	62	67	71	66	5	60	63	63	64	4	63	71	75	73	12	60	69	73	70	13
21	62	63	62	62	1	62	68	72	73	11	62	68	73	70	11	59	68	74	72	15
22	58	62	61	58	4	61	66	70	66	9	63	71	75	70	12	58	68	75	73	15
23	61	66	66	63	5	62	66	66	64	4	61	70	73	73	12	60	69	76	76	16
24	63	69	72	70	7	60	62	65	63	5	61	65	71	70	10	61	70	71	74	13
25	59	68	72	66	13	61	67	72	70	11	63	70	73	70	10	60	69	72	70	12
26	61	61	61	61	0	62	67	72	72	10	62	67	69	67	7	63	71	77	75	12
27	63	64	61	63	3	62	66	73	74	14	60	67	73	74	14	71	79	84	79	13
28	57	57	58	58	1	63	73	80	81	18	65	71	72	69	7	60	73	78	76	18
29	58	60	61	58	3	71	80	86	79	15	64	68	68	65	4	64	74	77	74	13
30	66	66	68	65	3	69	77	81	77	12	63	69	69	66	6	62	70	72	69	10
31	61	67	71	68	10						62	70	74	71	12	66	66	72	69	6
Mean	56	63	64	68	5	63	68	73	70	10	59	65	68	66	9	62	69	74	72	12
Greatest daily range					14					18					17					18

	SEPTEMBER.					OCTOBER.					NOVEMBER.					DECEMBER.					JANUARY.				
	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.	9 o'clock.	12 o'clock.	3 o'clock.	6 o'clock.	Difference.
1	63	70	72	67	9	65	76	83	82	17	60	70	69	64	10	49	58	59	56	10	56	58	67	52	15
2	62	67	69	64	7	72	81	86	82	14	61	70	69	64	9	59	52	53	50	3	48	58	53	51	10
3	60	66	67	63	7	68	79	84	81	16	62	66	67	60	5	53	64	66	56	13	52	62	65	52	13
4	61	65	73	66	12	64	72	73	69	9	58	61	61	60	3	56	60	64	51	8	50	60	63	50	13
5	62	67	72	62	10	61	68	73	71	12	56	62	65	58	9	62	66	50	50	16	44	47	51	51	7
6	63	68	69	64	6	66	70	76	73	10	61	67	69	64	8	42	55	59	46	15	49	51	51	50	2
7	60	67	70	67	10	61	66	66	62	5	59	69	71	63	12	47	50	59	50	12	50	58	58	54	8
8	62	69	77	75	15	63	69	75	69	12	57	66	71	61	14	50	54	59	45	14	49	53	52	51	4
9	62	70	79	74	17	64	73	77	71	13	54	65	69	62	15	44	50	57	43	14	49	54	58	48	10
10	61	71	72	70	11	63	73	79	73	16	53	61	67	61	14	48	49	60	44	16	47	52	55	53	6
11	58	70	76	73	18	64	74	80	73	16	59	65	69	61	10	41	55	59	46	18	54	55	55	55	1
12	62	71	75	73	13	63	75	79	75	12	60	65	65	58	7	41	49	57	42	16	53	57	63	58	10
13	67	76	84	80	17	66	72	77	69	11	56	60	61	60	5	44	57	67	50	23	56	59	61	57	11
14	69	80	85	81	16	61	69	74	69	13	57	62	61	56	5	58	69	71	55	16	53	57	63	56	10
15	63	73	79	75	12	61	73	77	71	16	55	67	63	58	12	50	62	65	52	15	52	55	63	56	11
16	63	71	76	72	9	65	74	80	74	15	58	64	61	58	6	57	61	64	48	9	50	64	70	56	20
17	63	68	68	63	5	67	72	76	72	9	60	68	64	54	14	52	53	57	57	5	56	64	66	53	13
18	61	66	70	69	9	67	71	71	66	5	56	63	65	58	9	57	52	57	57	5	54	65	69	60	15
19	61	70	76	71	15	64	69	70	66	6	55	65	69	60	14	58	58	58	59	1	54	65	65	52	12
20	59	66	76	66	17	59	69	73	68	14	56	69	73	63	17	58	60	59	57	3	50	56	61	49	12
21	66	71	74	61	8	65	72	71	70	7	56	69	73	65	17	50	52	61	50	11	49	60	61	48	3
22	66	72	73	69	7	60	68	68	64	8	62	71	75	64	13	51	58	57	57	7	46	55	57	49	9
23	64	73	80	77	16	60	62	63	61	3	66	77	79	78	12	56	58	58	58	2	50	63	67	53	17
24	67	77	82	78	15	62	68	74	69	11	68	80	79	73	12	57	59	60	57	3	53	56	55	47	9
25	70	75	77	75	7	60	68	74	69	14	64	68	69	64	5	56	56	56	55	1	49	65	61	45	10
26	65	70	68	65	5	62	73	76	69	14	58	62	61	59	4	55	60	60	56	5	49	58	63	48	15
27	63	65	68	66	5	60	60	63	63	3	53	54	55	52	3	56	57	56	57	1	47	58	60	48	13
28	62	68	66	62	6	63	68	72	64	9	56	59	62	61	6	58	58	59	58	1	48	58	61	47	14
29	60	68	73	69	13	60	71	74	69	14	53	60	65	51	14	52	61	57	58	9	48	59	62	49	14
30	63	72	76	72	13	60	69	72	66	12	48	57	66	59	18	60	59	56	53	7	47	50	50	47	3
31						59	70	75	69	16						53	55	54	54	2	50	58	60	48	12
Mean	63	70	74	69	11	63	71	74	70	11	57	65	67	61	10	53	57	59	52	9	50	58	60	51	10
Greatest daily range					18					17					18					23					20

divided through many small valleys, so that, except for some two or three months in the year, it is felt only as a light and pleasant breeze.

If we examine the climate of this valley we find that there are few days in which an invalid cannot take air and exercise out of doors, from May to February. During these nine months in this year there were only 34 days of rain, while at Mentone 80 are reported as the yearly average, but though the rainy days are few in number, yet the quantity of rain that fell amounted to some 44 inches. We find only 11 days reported as cloudy and no rain, 5 as sultry, owing to there being little air and the temperature upwards of 80° F., 184 days in which the wind was light, 24 in which it was brisk, and 25 in which there was a strong wind. There is noted on 231 days a north-west wind, on 26 a south-east, on 2 an east wind, and on 9 a south-west wind. I subjoin a table giving the temperatures for nine months, from four observations a day made at 9 and 12 A.M. and 3 and 6 P.M., and will only call attention to the fact that there were 99 days in which the day range was between 55° and 70°, and that 21 of these were in November and 13 in December, while 19 days in the latter month fell between 45° and 60°. The highest temperature was at 3 P.M. September 14th, 85° F.; the lowest, December 6th, at 9 A.M., 42° F.; the greatest difference between these extremes for the day time, for the whole nine months, being thus only 43° F.

I have several times known thin sheets of ice to form in valleys at night in December and January. There is a very great difference between the temperature at noon and midnight, and it is a matter of regret that no observations have been recorded on this point.

Let us now briefly examine in what respect the climate of San Rafael is like that of the Western Riviera, and especially of Mentone, and wherein there is a difference. Mentone lies on the shores of a tideless sea—the Mediterranean—on the undercliff of the maritime Alps, and is protected to a great extent on all sides except the south, by surrounding mountains. The north-west wind is that prevailing during the winter season, and is the dry, bracing wind, while the south-east wind is that which brings rain. In the situation of San Rafael we notice the influence of protecting mountain ranges in modifying the climate of the valley, and even in it, their influence in producing a separate climate for different localities. Thus those within the influence of the currents passing through the several "*puerta suelos*" have a lower temperature, and feel the force of the wind, while more sheltered localities are almost without even a breeze, and are surrounded with a much warmer atmosphere. We notice also that the north-west is the dry wind, and prevails more than any other—that the southern, south-eastern, and south-western winds are the occasional and rain-bringing winds. Thus we see points of resemblance between Mentone and the valley of San Rafael in their situation, and in the character of the prevailing winds, while if we examine as to the number of rainy days, and cloudy days without rain, when an invalid would be unable to keep out of doors, we will find that while Mentone reports some 80 days on which rain falls in the year, with an average rainfall of about 25 inches, the same amount of rain descends in less than 40 days, while exceptionally the rain fall may rise to 44 inches, or even higher. We also find that though an occasional frost may take place at night in December and January, that in these months the maximum temperature which at Mentone in the shade is nearly over 58° F., rises to 65°, and many times to 70°. In other words, the thermometer tells us what many of my patients have already informed me of, that it is warmer in the daytime, and that they require less protection against the cold than they did in the south of France. Dr. Bennet gives 69 days in which the sky was overcast and the sun obscured without rain, and 80 days of rain, as already mentioned above. I am unable to give the exact number of days annually at San Rafael in which the sky is overcast—not having the register for an entire year complete—but find only 11 days marked as cloudy during the nine months. Hazy days also occur, and occasionally fogs on rising in the morning are found hanging to the top and sides of Tamalpais, and I have known days in the season when they have hovered over the valley, and on several occasions within the three years of my residence they have invaded the valley itself. In this respect Mentone has the advantage over us, for I do not remember to have seen a fog during my stay there; but do remember a number of chilly, windy days, which, without the ordinary conveniences for making fires, were spent wrapt up in overcoats, and in endeavoring to make a fire that should remind us of home, with several baskets of olive-wood. The sensations produced by our heaviest fog may perhaps be compared to those that I experienced on these occasions. Fortunately for us we are abundantly supplied with wood, and the hotels and cottages are all or nearly all furnished with open fires. So that on these rare occasions the invalid can house himself very comfortably "until the evil day be overpast," when he can once again emerge from his retirement and enjoy the bright sunshine, which has again resumed its sway. Mentone, its walks and drives, are all in a limestone region—there is a glare and reflection of the sun which our bright-green vegetation in the winter and spring, and brown dry herbage of the summer and fall, prevents.

Again there is a great difference of temperature between the sun and the shade in the same place. This, owing to our soil-covered rocks, is not so marked; on the other hand, while we love many of the interesting objects of our walks and drives—while we have no Monaco or Ventriniglia, no Roccabruna or Bordighona with their associations both present and past, and have to content ourselves with groves of large trees, with fine views of the bay of San Pablo or of Mount Tamalpais, and of highly picturesque scenery from mountain sides and amidst valleys, we yet are among people who speak the same language, and feel and think to a greater or less extent as we do. There is thus less of the feeling of isolation, less home-sickness, in other words, than one often finds amongst Americans who have made a winter settlement at any point in the western Riviera, and this I judge to be a matter of a good deal of importance, as the mind reacts powerfully upon the body, especially in the class of cases sent to either of these places. If such is the climate of San Rafael, to what class of cases is it adapted? A cool, bracing, moderately equably sunshiny summer, fall, and winter, and a more or less windy spring, with a rainfall of perhaps on an average 25 inches, with few cloudy or sultry days, and under 40 days (in the season of nine months) in which rain falls—such may be considered the principal characteristics of this climate. If we believe, with Doctor Henry Bennet, "phthisis to be essentially a disease of debility—that it principally attacks those who have received organization deficient in vitality from their parents, or who have injured the vitality of an originally good constitution by excesses of any kind, or in whom such a constitution has been impaired by overwork or by hardship and privations independent of their own will. In such a disease—one essentially of defective vitality—a bracing, stimulating climate such as I have described,

must be beneficial, and has been most decidedly so, both in my own case and in those of many whom I have attended" ("Winter in the South of Europe"). "If a consumptive patient can be improved in health, and thus brought to eat and sleep well, thoroughly digesting and assimilating food, the battle is half won; and helping the physician to attain this end is the principal benefit of the winter climate of the Riviera," and I may add, of the autumn, winter, and summer climate of the valley of San Rafael. "Amongst the consumptive patients I have attended, those who were in the early or even secondary stages of the diseases, and had vitality and constitutional stamina left, have mostly done well. I have seen in many young persons well-marked crude tuberculous deposits disappear, gradually absorbed. In various cases of accidental phthisis in middle-aged overworked men, the amelioration has been still more apparent. I have seen well-marked cavities become partly or entirely cicatrized, and the constitutional symptoms gradually subside, the general health and strength steadily improving" (*ibid.* page 127). "Those who are in the last stages of the disease, on the contrary, appear to derive but little benefit from the change. The malady seems to progress slowly but steadily. They suffer from the cold and the wind"—but not in San Rafael, at least to the same extent—"from the occasional outbursts of wet, chilly weather." Such patients in the last stages of "phthisis, emaciated, unequal to any exertion, evidently arrived at the concluding stage of their earthly prilgrimage, are in my opinion, better at home or in a warmer climate than that of Mentone or San Rafael" (*ibid.* 132). "It is easy to understand that a dry, bracing, cool, invigorating climate, such as I have described, should have a beneficial influence on the respiratory mucous membrane of persons who have still some of the vital power of youth or some constitutional stamina left. When we add to this, all but daily exercise in the open air throughout the winter, in the midst of magnificient scenery, removal from the cares, anxieties, and duties of ordinary life, pleasant social intercourse with fellow-sufferers and their families . . . . we certainly have united all the hygienic influences calculated to renovate the general health, and thus to arrest the development of tubercular disease" (*ibid.* 132). "Indeed I am firmly convinced that a warmer and milder winter climate, only to be found in a tropical or sub-tropical region, is less favorable to the recovery of health in chronic chest disease . . . . Heat and moisture debilitate and relax the economy; while moderate cold and a dry atmosphere invigorate and strengthen it; and in the treatment of phthisis, the renovation of the constitutional health, as repeatedly stated, is of primary importance" (*ibid.* 133), and a too-bracing, vigorous climate, like that of Minnesota in the winter season, is in my experience equally as bad for all except those in the first stages of the disease, and who possess a good deal of constitutional vigor. In some few of these I have seen rapid increase in body, weight, and in strength both of body and mind, and in others a slower but steady improvement, accidents such as pneumonias excepted, while in those deficient in vitality, or in whom the disease has advanced to its second stage—in very many of these have I seen a fatal termination, hastened by a removal at too late a stage of the disease; hemorrhage, or rapid destruction of the lung substance, being the usual cause of death. Indeed, the very cold and the steady warm climates are not those adapted, as far as my experience enables me to judge, to most of the cases of phthisis. They have their uses, but we should remember that in the former the patient may be bettered to death—the action of the heart may be so accelerated as to give rise to hemorrhage from the rupture of the feeble lung vessels, and thus fatal bleeding may take place. And on the other hand we may destroy what little appetite and energy the invalid may have, by too warm and moist a climate. The truth lies in the mean, at least in most cases. The moist warm climate and the cold dry climate each are adapted to certain cases, and in them perhaps will do better than any other, the former in the last stages; and the latter in the very earliest stage of phthisis, but these are unfortunately the class of cases that one seldom finds sent to them. Many cases of asthma do well here, while not a few are not only not benefited but are rendered worse. There are those in which the nervous element largely predominate. Neuralgias and nervous diseases likewise, as a general rule, are, I think, rather aggravated. Throat troubles and some of the forms of chronic bronchitis do better more towards the interior of the continent, and further away from the sea, while some of the latter class of cases, especially in the winter season, gain flesh with great rapidity and lose their cough, and are in fact cured. Dyspeptic and kidney diseases in their first stages do well. That large class of cases which present themselves with broken-down constitutions—heart, stomach and lungs, all acting poorly, while positive disease cannot be detected in any organ, the result of over-work, mental or physical, or of indulgence of improper habits, these do well if their habits are changed, as a general thing. Cardiac diseases and rheumatic cases, in my experience, are not greatly benefited, though the experience of other physicians in this respect is different from that which I have expressed.

In closing this article I would say a few words as to accommodations, etc., for invalids. Home comforts being one of the most important things to be considered by both physician and invalid in selecting a health resort, I shall therefore offer no apology for what follows. San Rafael has a first-class hotel, the Tamalpais, where pleasant and neatly furnished rooms can be had at prices about the same as would be paid for rooms, inferior in most respects, at Mentone. A second hotel is nearly completed, while three or four country hotels and boarding-houses supply moderate accommodation. Quite a large number of cottages have been built the last season, and more will be ready within a few months. These are occupied to a great extent by those escaping from the summer winds of San Francisco, for part of the year, and for the remainder by the invalids staying the winter. One word as to the time of coming and going. The latter part of May is as early as it is prudent for an invalid to come to this climate. March, April, and May are more or less windy, and to invalids are the most trying months of the whole year—for this reason it is prudent for them to leave in February though many remain permanent residents the whole year round. The southern coast of California, Santa Barbara, Los Angelos, and San Diego, are readily accessible and present warmer climates, with peculiarities fitting them for certain cases. Eastern invalids will do well to come overland in June. The fatigues of the trip are much less than they are thought, when made with the conveniences that are now furnished, and many invalids that I have questioned have told me that they stood the trip well. Returning, I would strongly urge those who do not dislike the sea to go by steamer by way of the Isthmus. In this way Santa Barbara, Los Angelos, and San Diego, can be visited, and, if desired, Jamaica also, as alternate steamers stop at that island.

NOTE.—Most of the remarks of Doctor Bennet on the climate of Mentone are equally applicable to this

climate. I therefore quoted from him somewhat at length—*vide* "Winter in the South of Europe" by J. Henry Bennet, M.D., London, John Churchill and Sons, 1865.

OBSERVATIONS CONCERNING LOSTORFER'S SYPHILIS-CORPUSCLE.*

By EDWARD B. BRONSON, M.D.,

VIENNA, AUSTRIA.

The circumstances of Lostorfer's alleged discovery of a blood-corpuscle peculiar to syphilis, some months ago, it may be presumed are already familiar to the profession in New York. The stir which they at first excited in Vienna has scarcely abated since. The boldness of an assertion that syphilitic blood could be diagnosticated by the microscope, the *éclat* with which, after repeated tests, the assumption seemed to be made good; and finally the association with the affair of names like Hebra and Stricker, well sufficed to ruffle the composure of the scientific world. The discovery was, if true, as Prof. Wedl said, of little less importance than the discovery of a new planet. It is to be regretted that after all the discussion and inquiry that ensued, so little that is satisfactory has been elucidated. The commission appointed by the Gesellschaft der Aerzte to investigate and test the truth of Lostorfer's claims has dissolved, the gentlemen declining to serve, as they regarded the question as one to be solved only by personal investigation.

While the affair still hovers so in uncertainty, it may be interesting to those in New York wishing to test the matter for themselves, to know something of the appearances of the corpuscles of Lostorfer, and of the method here pursued in their investigation. (The terms Syphilis or Lostorfer's corpuscle are used here merely for convenience' sake, and without intention of either endorsing conclusions that may be immature, or of ignoring claims of precedence that may be properly due to the investigations made long ago by Prof. Salisbury.)

The method of examining the blood for the syphilis-corpuscles is simple enough, but the observance of certain particulars is peculiarly essential. Often a preparation excellent for purposes of ordinary examination will be found quite unfavorable to the observation of Lostorfer's corpuscles. Where, for instance, the blood-globules lie flat, dispersed singly, but in near proximity over the whole field, search for the syphilis-corpuscles will be at least attended with much difficulty, and usually fruitless. In a good preparation the *amount* of blood will be *small*, not occupying more than half the area of the glass-cover, and bounded by a narrow border of dried blood. To this end the amount of blood pressed from the slight puncture should be minute, to which the cover is then lightly touched and dropped upon the glass slide. The disposal of the blood-globules most favorable to the appearance of the corpuscles of Lostorfer is where the former have run together so as to form a sort of net-work containing clear interspaces. These will be found usually towards the edges of the preparation. It is in these clear interspaces that the appearance of the syphilis-corpuscles is most constantly remarked, as well as here most favorably studied and acted upon by reagents. The specimens, as soon as prepared, are brought into a moist chamber. The apparatus here used is a cylindrical glass jar, the cover fitting with ground-glass edges, containing a little rack for supporting the slides and a few drops of water at the bottom. In the microscopic examination the objective used is the No. 10 immersion of Hartnack, or one of corresponding magnifying power. The corpuscles can usually be readily seen with Hartnack's No. 8, but appear too small for purposes of study.

At the expiration of from 14 to 24 hours little granules will appear in the above-mentioned interspaces, rapidly in motion. Later in the same situations larger granules will be observed, and so they gradually increase with a positive appearance of development, till from minute indefinitely shaped granules, little bodies with distinct circular outlines appear, with bright reflection of the light at a higher adjustment, and dark as the lens is depressed, till at length, usually at the expiration of about 48 hours, corpuscles have developed which can with certainty be recognized as the corpuscles of Lostorfer. It is to be regretted that at present a description of these latter must be limited almost exclusively to their optical peculiarities. Chemical reagents have yet afforded but trivial assistance. In size the corpuscles vary very considerably. At the end of the second day they have usually an average diameter of from 0.002 mm. to 0.005 mm., and from this time forward their increase is proportionally much slower. When kept for a week or so they often attain the size of the red blood-corpuscles, while their ordinary size is but from one-twelfth to one-sixth of that. Finally, they seem to undergo a commencing degeneration, and their brilliancy fades. They remain usually, however, distinct, till lost by the drying-up of the specimen. By good light the appearance of the corpuscle is that of a delicate little sphere. By higher adjustment of the lens its reflection of light is stronger than that of the red blood-corpuscles. Besides its intensity, the diffusion of the brilliancy uniformly over its whole area distinguishes it markedly from detached bits of red corpuscles, oil globules, etc. The outline by this adjustment of the lens is undefined, nor is it by the deeper adjustment so sharply defined as that of the red blood-corpuscles. The difference is well marked, and an important point of distinction from numerous bodies liable to be confounded with the corpuscles of Lostorfer. On depressing the lens the corpuscle appears of a uniform light gray, without variation in depth of shading from centre towards the periphery. On depressing the lens still more

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* [The following note accompanying Dr. Bronson's article will be of interest as proving the peculiar advantages of the writer in studying the subject.—ED.]

VIENNA, MARCH 24TH, 1872.

DR. GEO. F. SHRADY—DEAR SIR: At the suggestion of Prof. Bumstead I have taken the liberty of sending you a few particulars regarding the *syphilis blood-corpuscles*, as named and claimed to have been discovered by Dr. Lostorfer.

Having occupied myself with the subject with more or less assiduity for a couple of months or more past, and, moreover, having had frequent opportunity of communication with Dr. Lostorfer himself, whose politeness in showing me his own specimens and in examining mine, has given me an especial advantage, I have presumed that some points which I have learned would be of assistance to those interested in the subject in New York, and hence that you might regard the brief notice inclosed, worthy of publication in your journal. It has also seemed to me interesting to compare the appearances of these corpuscles of Lostorfer with the appearances of syphilitic blood as described by Prof. Salisbury, trusting that if there be merit in the matter, a priority of claim may be speedily established for an American.

I am, very truly, your ob't servant,

EDWARD B. BRONSON, M.D.

(J. MUNROE & Co., 7 Rue Scribe, Paris.)

the body disappears from view, without becoming darker in hue. Another peculiarity of these corpuscles, not usually shared by others resembling them, is the frequent occurrence of little processes jutting out from their surface. As observed by the writer, these have never amounted to more than a greater or less irregularity of the contour at some point. Dr. Lostorfer, however, asserts that he has seen them sometimes go on to the development of a little chain, like a micelium. He also describes the formation of vacuoles within the corpuscle, which gradually increase till they come to occupy the entire body's space. It was from these appearances that Lostorfer formed the opinion that the corpuscles were spores.

The peculiar characteristics, then, in the appearance of the syphilis-corpuscle are (1) its apparent delicacy of structure; (2) the moderate definition of its contour; (3) its uniform grayish shade; (4) its reflection of light stronger than that of the blood-globules; and (5) finally, the formation of little sprouting projections (Sprossen-Bildung) upon its surface. Of course in absence of a good light these appearances will be modified; the brightness less intense, and instead of the light-grayish there will be a darker shade.

As to chemical reagents, but one has yet been found of much service as a test. Dr. Lostorfer states that on the addition of acetic acid to the blood his corpuscles shrink, and finally become indistinguishable, while bits of detached protoplasm swell and are dissolved under its action. Several other bodies resembling in point of size, shape, etc., the syphilis-corpuscles resist much longer the action of the acid, or remain unchanged. The test is attended with some difficulty, owing to the liability of the corpuscle under observation being swept away by the sudden current. The choice of corpuscles for experiments which lie in the above-described open interspaces, and thus, to some extent, protected from the influence of the current, as well as the very gradual addition of the diluted acid, will to some extent obviate this danger. The corpuscles of Lostorfer will be seen, directly the acid reaches them, to change their form to a more contracted one; assuming often, as the acid continues to operate, a stellated form, their brilliancy fades, and they become more and more indistinguishable, till in the accumulating débris they are finally lost from view.

Bodies met with in blood which can be mistaken for the corpuscles of Lostorfer arise certainly in large part from the disintegration of the blood-corpuscles. The red globules often detach little corpuscles that assume about the size and shape of the syphilis-corpuscles, and have a tolerably strong reflection of light. These corpuscles, however, usually retain the greenish or reddish color of the parent globule, and, what is more marked, their outline is *always sharply defined*, and their reflection of light less uniform and less intense than that of the syphilis-corpuscles. Their appearance is readily learned by simply warming a specimen of blood over a flame, when these little bodies will be detached in large numbers. Of more importance are the bodies that result from the disintegration of the white corpuscles. A not uncommon opinion of the origin of the corpuscles of Lostorfer amongst those who have investigated the subject refers it here to this disintegration. The white corpuscles commence early to disintegrate. First the nuclei and granules become distinctly defined, then the contour of the corpuscles appears at some point ruptured, and numerous bodies will be found issuing from it or lying in its immediate vicinity, which in size, shape, and perhaps some other respects resemble the syphilis-corpuscles. They consist for the most part of nuclei, spheres of protoplasm and vacuoles, probably containing gas. They are mostly easily distinguished from Lostorfer's corpuscles. They are often of a reddish tinge; are pale bodies, wanting the brilliancy of the syphilis-corpuscles, or have sharply defined contours. Finally, in acetic acid is their reaction, at least generally, not like that of the corpuscles of L., viz.: they do not shrink up under its action. There will also be frequently found in blood little bodies possessing the optical properties of oil-globules. Prof. Wedl, in his report on the corpuscles of Lostorfer, before the Gesellschaft der Aerzte, pronounced these corpuscles as identical with fat-globules, or possibly also bits of protoplasm. But the circumstance that corpuscles having all the appearances of fat-globules do often occur in the blood, and that their dissimilarity to Lostorfer's corpuscles is strikingly marked, renders it, at least, doubtful if it was the corpuscles of Lostorfer which Prof. Wedl had observed. Amongst the numerous critics who have subsequently expressed opinions on the nature of these corpuscles, I think no one has supported the opinion of Wedl. Prof. Stricker has declared his total inability to form an opinion of the value of the corpuscles of Lostorfer, and were they fat-globules one would suppose he must have discovered it. Moreover, fat-globules would be found in the fresh blood, whereas the syphilis-corpuscles are scarcely recognizable before the second day, and usually not before the expiration of 48 hours. As to constancy of appearance of these corpuscles in syphilitic blood, Dr. Lostorfer asserts that he has found them in the blood of every syphilitic patient which he has examined, not, however, in every specimen. He has, indeed, sometimes been obliged to take blood for the third time from the individual before his search was rewarded. Certainly the *frequency* with which these corpuscles occur in syphilitic blood can scarcely but be remarked by any one who will take the trouble to examine the blood with care, in the manner here described; and it may be also ventured to assert that the more familiar the distinguishing characters of these corpuscles become, the less frequently will corpuscles resembling them in non-syphilitic blood be regarded as identical.

In reference to the occurrence of Lostorfer's corpuscles in non-syphilitic blood, opinions here are naturally widely at variance. Nothing, indeed, to this effect has yet been clearly substantiated, and so Lostorfer remains master of the field. However, at one point he has been surprised, and the result looks at present very doubtful. In the blood, namely, of lupus patients, corpuscles are found whose nearness of resemblance to the corpuscles of Lostorfer is, to say the least, very striking. The results of the investigations which Prof. Stricker and Dr. Lostorfer are still pursuing remain doubtful. It is said they react differently under acetic acid. Out of specimens of blood from six lupus patients, examined by the writer, that from five all exhibited corpuscles of very close resemblance to the corpuscles of Lostorfer. To three of these acetic acid was successfully added. The corpuscles did not shrink, their outlines became rather sharper, and the structure of the body seemed materially altered, or as though its contents had then disappeared. By exactest adjustment of the lens the contour appeared darkly and strongly defined, and then by the slightest movement of the lens the body was instantly lost from view.

Before the Gesellschaft der Aerzte it was stated that Lostorfer's corpuscles had been found in the blood of variola, but others have not confirmed the observation. In a number of cases examined, nothing at all closely resembling the syphilis-corpuscles was found, and Dr. Lostorfer says that the result of his examinations was the same.

Many observers claim to find, in perfectly normal blood, corpuscles corresponding in all respects to the corpuscles of Lostorfer. These cases are, however, still doubtful, and I am of the opinion that Dr. Lostorfer has satisfactorily undergone every test which has yet been given him. On one occasion, in blood from a person who had never had syphilis, corpuscles of such suspicious appearance and manner of development were found that specimens of it, together with syphilitic blood, were given as a test to Lostorfer. The first specimens were declared as doubtful, and the request made for another supply. After the second examination, the specimens were marked as "not syphilitic." Their points of distinction were their somewhat darker appearance, sharper contour, and absence of processes. A late examination with acetic acid showed greater resistance to its action than possessed by syphilis-corpuscles. Another peculiarity was their subsequent entire disappearance from the person's blood.

An array of questions of a practical nature remain yet totally unanswerable. Of the period of first appearance of the corpuscles, continuance of relation to the stage, character, or severity of the disease, nothing definite has been announced. The *nature* and *origin* also of these little bodies is still as much a mystery as the essential cause of syphilis itself.

THE TREATMENT OF COMPOUND FRACTURES OF THE LEG, AT BELLEVUE HOSPITAL.

By THOS. K. CRUSE, M.D.,

LATE HOUSE SURGEON.

For sixty years the abiding-place of every form of disease and injury to which human flesh is heir, Bellevue Hospital has reached a period of its existence when, in the words of Billroth, the building is a mere slaughter-pen of the wounded. Spite of the most careful and judicious sanitary arrangements, recovery from an amputation of the thigh for injury is without the recollection of the oldest inhabitant; and when the surgeon finds pyæmia follow exsection of the elbow, and in fact the most trifling operation whereby the medullary canal of a bone is in any wise invaded, he is sorely tempted to refrain from interfering in such cases, not willing to subject himself to the imputation of hastening a termination which he knows must be death, whatever course be followed. A text like this, if properly handled, might induce those who are ready to pour out money for building palaces like the magnificent new *St. Thomas' Hospital* on the Thames, for the housing of a few hundred paupers, to consider whether less money would not do more good in putting up temporary buildings, like the *Boston Peace Jubilee Coliseum*, for such a purpose. Medical men take long to learn that plaster, stone, and mortar hold seeds of death most pertinaciously. At Bellevue our street Juggernauts averaged us about two patients for each male ward—patients with legs more or less smashed by the wheels—patients whom from the moment of entrance pyæmia marked for her own. This number seldom failed, and when they died the railroads supplied new occupants for the empty beds.

The old bran-box, and such eclectic methods of treatment as were devised for these cases by enthusiastic *internes*, went out of use ten months ago. The atmosphere of the hospital to-day is as bad as it was ten months ago; but while last spring these street-car fractures of the leg mostly all died, or were amputated and died, or recovered with stiff joints and a very crooked limb, to-day the greater portion of these legs are straight and strong after three months' treatment, and the patient does not even walk lame. The treatment that does this seems to me one of the greatest of modern surgical triumphs. To rescue from what was always looked on as certain death, and to reconstruct a disorganized extremity, is not a matter of ordinary surgical ability. To see the applications used in London and Paris hospitals, on a late visit to those cities, and to read of new methods for this and that indication in these cases, makes one indulge in a pitying smile—indicating a state of mind very, very bad to entertain, but which will be forgiven by any one who will investigate its cause.

The treatment is by plaster-of-Paris. First, let me state that, with the exception of the iron staple used in putting up fractures of the thigh in plaster, the whole details of that treatment for each and every fracture have been the work of the house-staff, and above all of Dr. Bryant. One of the attending surgeons published in the *New York Medical Journal* for June, 1871, some cases which that gentleman, at a meeting of the "County Medical Society," allowed to be called his cases.

As many of these cases were taken from wards with which that gentleman had no connection, and as he never applied the dressing himself, nor superintended its application, the propriety of speaking of "his" cases may be questioned.

My recollection of the "attending staff" is that several of its members were opposed to the treatment, and it was only when shortening, measured by inches, was compared with thighs as long after as before the break, that the conviction of its being a good thing dawned. This piece of justice done, we plunge *in medias res* to give cases and statistics, and to consider the many varieties of modifications, for exceptional indications would require much space. The mode of application for a typical case will be given, and I trust that any gentleman who cares to try the apparatus will make arrangements to see it applied at the hospital. Everybody agrees that to keep the broken fragments in correct apposition is the end of all treatment for fractures. The plaster does neither more nor less than this; hence where success wholly depends on details, it is obvious that a too minute description cannot be given, and, as above said, demonstration is best of all.

Suppose that the ambulance has brought to the hospital a young man who has just been run over by a car. A tourniquet has been applied to the femoral; the bandage around the leg and the oakum in the fracture-box are stiff with blood, and the ambulance surgeon thinks that the anterior tibial has been wounded.

You have a bed ready, which, when possible, it is best to have of springs for its upper half, but below, a thin horse-hair mattress must rest directly on boards. The man will have to pass many weary weeks on that bed, so you make your mind easy by horse-hair and springs above—as a prophylactic against bed-sores, but there must be no inequalities where the extremity is to rest, so you use boards below. A rubber-cloth protecting the sheet where the leg is to lie, the patient, fracture-box and all, is carefully lifted upon this bed. The man is in good flesh, with firm muscles, uses alcohol very exceptionally, and is free from constitutional taint. He has bled freely, but the pulse is strong, and shock of minimum amount. The trousers are cut away and bandages slit up, discovering a state of affairs such as to make of amputation or conservatism an open question. The decision must be made at once, for, though you would not amputate to-night, the dressing is not to be delayed till morning, lest swelling defeat the intention. Here is a wound—evidently made by that jagged projecting end of the lower fragment of

the tibia—which commences at the seat of fracture just below the knee-joint and extends downwards two inches or more. Various splinters of bone may be felt in the wound, and perhaps a fissure running far down the shaft. Below, one or two inches above the ankle-joint, where the car-wheel has passed, there is a fracture of both bones, compound as to the tibia, of most difficult management, because of the sagging backwards of both the foot and the lower fragments, but presenting the favorable feature of non-invasion of the ankle-joint. I consider the fact one of the most signal triumphs of plaster treatment, that the feature of special odium in such fractures, for which so great a multitude of plans, both by extension and otherwise, have been suggested —the backward tendency of foot and lower fragments— never occasions a second thought after the gypsum bandage has been put on. There are the ordinary ecchymosis and other usual symptoms in the supposed case. The man is young, does not want to lose his leg, and we certainly do not want to cut it off. Suppose, then, it is decided that he stands an equal chance of life whichever procedure is adopted, and the leg is to be saved if possible. Give chloroform if the man be timid, loosen the tourniquet, and wait long before you are certain that every bleeding point has been secured. Wash the limb, and shave the surface hair in the vicinity of the wounds. Then draw on the leg a flannel casing—preferably of closely-fitting thick drawers—and over the flannel where the wounds are, envelop the circumference of the leg by an annular ring of rather closely packed oakum wrapped in oil-silk or india-rubber cloth. These rings extend an inch or two above and below the margins of the wounds. Their purpose is to prevent the plaster roller from lying immediately over the wound, for if the contact was direct, or, what amounts to the same, if the plaster bandage was applied over the flannel casing only, the cutting a fenestra at the site of the wound would cause bulging of the tissues through the opening, resulting in blood stasis and great pain. By the band of oakum the edges of the fenestra are kept from appearing to constrict the leg—an appearance caused by the freedom from the pressure of the plaster bandage enjoyed by the wound and that part of the leg corresponding to the fenestra. This is a very important point, and dispenses with the oft-reiterated objection to the treatment, that the tissues swell in the fenestra. Before applying this oakum wrapping, which may be looked on as a mould for the setting of the plaster, it is well to provide against the soiling of the flannel wrapping of the limb with blood, by slitting the material at the wounds, and temporarily dressing the latter with picked lint and a few turns of a tightly applied bandage. The foot having been encased in a bandage or any convenient material for preventing direct contact of the plaster and skin, and the leg having been brought over the foot of the bed, an assistant grasps the heel with one hand, holding the foot at right angles to the leg, and with the fingers of the other surrounds the lower point of fracture, thus acting as a temporary splint. Another assistant puts his fist in the popliteal space, keeping the thigh elevated and the knee-joint very slightly bent, whilst the other hand controls the upper point of fracture. Two other aids attend to the bandages, and stand ready to relieve the first. During this time there have been prepared eight or ten ordinary surgical bandages, or preferably of a lighter material, into the meshes of which have been sifted evenly and lightly a quantity of the best modellers' gypsum. One or two of these bandages having been placed in a bucket of lukewarm salt water, when they cease to bubble are squeezed dry, and, the extremity in position, are applied quickly and evenly in a single layer. The object of this preliminary bandage is to retain the fragments in position and coaptation while the rest of the dressing is applied. It is unnecessary to carry the first bandage above the knee or below the ankle. A piece of thin blanket, intimately rubbed with a quantity of plaster, worked into paste with water, is next folded into a triple layer, the dimensions, when so folded, being long enough to reach from the toes to the upper third of the thigh, and the width being equal to about four inches. This mass is applied posteriorly, commencing at the root of the toes, continuing down the plantar surface of the foot, up the back of the leg and thigh, in the popliteal space, and stopping at the upper third of the femur. The fingers of the surgeon mould this "*posterior support*" to the inequalities of the surface, and the result is, when set, a plaster *board* fitted accurately to all irregularities, holding the foot in position, retaining the bend at the knee to the comfort of the patient, and is the king of all splints. When the plaster in this has partially set, the rest of the bandages are wound round the leg and posterior support *en masse*, three or four layers being required, and the extent as before from the toes to the upper part of the thigh. After fifteen minutes the thing is "set," and the result of a half-hour's work is seen in an apparatus that, with its maimed contents, can be rolled from side to side, can be raised a foot or more from the bed and dropped again without giving a twinge of pain to a patient who had previously suffered when any one walked near his bed. The fenestræ are best cut before the plaster is dry, and there is scarcely any limit to the size of the openings that may be made—six inches square if necessary—so firm is the grip of the posterior support. In such a case as we have supposed an idea may be gained of how fragments are held by asking the patient to contract the rectus, when, no matter what the size of the fenestra, the fragments of the tibia will give no response to the muscular action. The comfort of the patient may be enhanced by elastic swinging of the whole.

Space compels me to forego the pleasant duty of signalling how the apparatus may be modified for certain exigencies, what wonders it is capable of in cases of knee-joint excision, necrosis operations, etc., and the details of many cases happily treated by it.

Lister's antiseptic dressing can be most advantageously used in connection with the splint, but, however the wound be managed, it is important to guard against the discharges; soaking between the limb and the bandages creating an atmosphere which would poison any wound. At each dressing cotton must be stuffed under the margins of the fenestra before syringing, and fresh cotton covered with oil-silk after the same operation. Good drainage must be secured, and oakum is by far the best material for absorbing discharges.

Dr. Curtis first devised the posterior support in a case of fracture of the patella involving the knee-joint. The same device, made of steel, is figured in an old number of the *Edinburgh Medical and Surgical Journal*. Dr. Bryant applied it to the use of a support in compound leg fractures. That gentleman also discovered with what impunity the largest fenestra might be cut, and did all the hard work attendant on popularizing the treatment. Dr. St. John and myself found that when wounds forbade the posterior support, the same principle could be carried out by irregularly-spiral, lateral, or even anterior supports.

The quick healing of the wounds and the rarity of subsequent necrosis explain why local means are efficacious preventives against constitutional disease like pyæmia. Under the old treatment movement of the

fragments in an open wound kept the open canal of the bone in a constant pus-bath. Now the external wound heals quickly, and the bone unites almost as a subcutaneous fracture.

Last winter there was admitted to Bellevue a woman who four months ago received a compound fracture, for which she was treated at St. Vincent's Hospital. When admitted to Bellevue she was entirely crippled, never having sat up since the injury. The ankle-joint was nearly anchylosed, the foot being extended and in the same line as the leg. Through numerous sinuses, the tibia was found dead to the extent of the lower half of the shaft, and motion was free at the point of fracture. Amputation was decided on, but I asked to be allowed to attempt to save the leg. I removed the sequestrum, shaved the ends of the fragments of the tibia, broke up the ankle adhesions, and treated the case as a recent compound fracture. In six weeks she was on crutches; and in two months left the hospital with sinuses healed, a straight leg, firm union of the bone, free ankle movement under the control of her own muscles, and a barely perceptible limp that required no crutches.

SMALL-POX STATISTICS, 1871.

By A. E. MACDONALD, M.D.,

CHIEF OF STAFF, CHARITY HOSPITAL.

While recently engaged in preparing for presentation to the Board of Commissioners of Public Charities and Correction the Yearly Report, for 1871, of the Small-pox Hospital, some points in the statistics particularly excited my attention. Believing that they will be found of interest to the members of the profession, and trusting that their publication may lead to the examination of the records of other hospitals, and thereby to the confirmation or refutation of the inferences to which they would seem to point, I take the present opportunity of briefly stating them.

The following table, presenting, in a condensed form, the statistics of the hospital for the year 1871, will render my references more intelligible, and at the same time furnish the basis for further investigations.

General Statement—Small-Pox Hospital, 1871.

1871.	WHITE.		COL'D.		TOTAL.	NATIVE.	FOREIGN.
	Male.	Female.	Male.	Female.			
Remaining in hospital, Jan. 1, 1871	17	11			28	7	21
Admitted from Jan. 1 to Dec. 31, 1871	1,299	1,134	35	30	2,498	1,097	1,401
Total under treatment	1,316	1,145	35	30	2,526	1,104	1,422
Died from Jan. 1 to Dec. 31, 1871	307	202	14	10	533	303	230
Discharged from Jan. 1 to Dec. 31, 1871	914	868	19	20	1,821	726	1,095
Remaining in hospital, Dec. 31, 1871	95	75	2	0	172	75	97

General Statement—Small-Pox Hospital.
Quarter ending March 31, 1872.

1872.	WHITE.		COL'D.		TOTAL.	NATIVE.	FOREIGN.
	Male.	Female.	Male.	Female.			
Remaining in hospital, Jan. 1, 1872	95	75	1		171	74	97
Admitted from Jan. 1 to March 31, 1872	590	330	11	4	935	350	585
Total under treatment	685	405	12	4	1,106	424	682
Died from Jan. 1, 1872, to March 3, 1872	119	76	6	2	203	90	113
Discharged from Jan. 1, 1872, to March 3, 1872	421	259	3	1	684	201	483
Remaining in hospital, March 31, 1872	145	70	3	1	219	133	86

Death-rate—18.35 per cent.

It will be seen that the entire number of patients treated during the year was 2,526, and that of these 533 died, or 21$\frac{1}{10}$ per cent. Considering the nature of the disease *per se*, and the unusually severe type which it has in the present epidemic presented, the death-rate is not a high one. In view, indeed, of attendant circumstances, and especially in comparison with other death-rates from small-pox, it is singularly low. In the first place, a considerable proportion of the patients are received either directly from quarantine, or indirectly from the same source through the Emigrant-Refuge, on Ward's Island. Over 700 patients were so received last year. Many of these are admitted when the disease is far advanced, some are quite beyond the aid of treatment and die within a few hours of their arrival, and all are in the low state of physical health engendered by a long sea voyage in an emigrant ship. Leaving these out of the calculation, or those even who are moribund upon their admission, the rate of mortality would be very considerably diminished. Again, comparing the death-rate in this hospital with that among patients in other hospitals or under other conditions, its relative smallness becomes still more evident. A computation of the death-rate in such European hospitals for the treatment of small-pox as I have been able to obtain statistics of gives an average of 27 per cent., or nearly six per cent. more than in this hospital. The mortality among the patients who are permitted by the New York Board of Health to be isolated and treated at their own homes reaches the high rate of 35$\frac{1}{2}$ per cent., or over 14 per cent. more than among the hospital patients. The latter difference becomes the more remarkable when it is remembered that the requirements of the Board of Health in the matter of isolation are such, that the mere ability upon the part of the patient to comply with them argues the means also to provide every advantage in the way of medical attendance, nursing, and the accessories of treatment. It is surely a strong argument in favor of the usefulness of hospitals that the relative chances of recovery of the pauper, compelled to avail himself of the means of treatment which the public provides, and the well-to-do patient, with means of his own selection readily available, are so greatly in favor of the former.

Of the patients treated in the hospital during the year, 1,104 were natives of this country, and 1,422 of foreign birth, but among those who died the difference was upon the other side, 303 being natives and 230 foreign-

ers. In other words, of the natives, 27 out of every 100 died, and of the foreigners but 16. The preponderance being upon the side of the foreigners in the matter of admissions would indicate greater susceptibility to the disease or commoner exposure to infection, and it is doubtless thus explicable. Those who are not admitted from quarantine or the Emigrant-Refuge, come to us chiefly from the unhealthy atmosphere of the tenement houses, and the majority of them are Germans, whose antipathy to vaccination is well known. But upon what grounds is the greater mortality among the natives of this country to be accounted for? Apparently it would argue upon their part less inherent vigor of constitution with which to withstand the ravages of the disease, and supporting, as it seemingly does, much that has been written of the physical degeneracy of our race, it would be of more than interest to learn if the records of other similar hospitals confirm the inference.

More males than females were received into the hospital during the year, and the rate of mortality among those of the former sex was considerably the greater. Relatively it was, in round numbers, 24 per cent. among males to but 18 per cent. among females.

Among the colored patients the rate of mortality was higher than in any other class, as it reached 37 per cent.

Such are, in brief, the facts which the tabulated statistics of the small-pox hospital for the year 1871 reveal; and, still more in brief, an indication of apparently justifiable deductions therefrom. I trust that the subject may receive more extended treatment from abler hands, and that the collation of further statistics will furnish the material for more reliable inferences than those of a single hospital can provide.

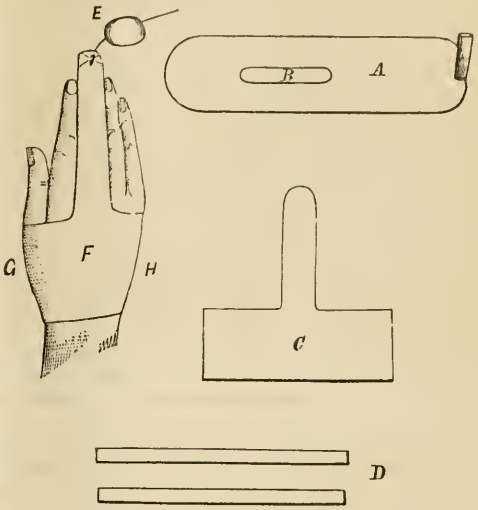
ON EXTENSION AND COUNTER-EXTENSION AT THE WRIST AND FOREARM.

By F. A. BURRALL, M.D.,

OF NEW YORK CITY.

Several years ago a patient presented himself at the Northern Dispensary who had been suffering much pain from what he termed a "strumous" inflammation of the wrist-joint. His rest at night had also been much disturbed. For the purpose of keeping the surface of the joint from contact, I devised an apparatus which, with slight modifications, is that now presented. I have described it to several physicians, and they were not familiar with anything similar, so it may be novel; at all events I think it is useful.

It consists, in its simplest form, of a flat splint, *A*, about three inches longer than the distance from the condyles of the humerus to the tip of the middle finger, in one end of which is an upright peg, sloping downwards and inwards, that the cord or tape to be attached to it may not slip. In the splint represented in the diagram is a fenestrum for the passage of an adhesive strap. I have never used such a fenestrum, but it seemed to me that it might in some cases be a needed improvement, as will be understood when the application of the dressing is referred to. A piece of adhesive plaster (*C*) cut from a paper pattern and intended to place upon the hand, with two strips of the same material long enough to extend from above the seat of injury to three or four inches beyond the olecranon process, and about two inches wide. A piece of tape and a rubber ring complete the apparatus. *Sticking*-plaster is essential. To apply the dressing, tie the tape and ring to the upright portion of *C*, adapt *G* to the back of the hand, and lap the transverse pieces over the palm with moderate pressure. Place the counter-extending bands on the anterior and posterior surfaces of the forearm, and, if necessary,



apply over them transverse bands or a very loose roller. Make the first extension and counter-extension with the hands, and lay the limb upon the splint, and if the fenestrum be used, pass one of the straps through it. The prone position of the limb is most convenient for application, but the others may be used. Carry the counter-extending bands around the upper end of the splint, overlap them, then tie the tape to the peg, making as much extension as is desirable.

I have found this apparatus very useful in a severe fracture at the lower end of the radius, where, in consequence of a wound on the anterior surface of the forearm, the usual splints were not advisable. In many instances I think that the counter-extending band on the dorsal surface of the forearm will be sufficient. If the plaster is not very good, it may be buttoned over a peg on the under side of the splint.

In explaining this apparatus to Prof. Frank H. Hamilton, he called my attention to a description in his work on "Fractures and Dislocations" of the apparatus of Dr. X. C. Scott, formerly resident surgeon to the Brooklyn City Hospital, for the treatment of certain fractures of the forearm in a supine position. It seems to me that the method now presented has the advantage over the useful apparatus of Dr. Scott of greater simplicity. By detaching the tape which surrounds the peg, the hand and lower part of the forearm are at once set free from the splint and may be washed or examined. I have also prepared the counter-extension by adhesive straps to the rectangular splint and bandage of Dr. Scott, although, in fractures near the bend of the arm, his counter-extension might be substituted. It is the extending band to which I wish chiefly to call attention. The diverging borders *G* and *H* offer an excellent resistance, and the traction is also distributed over the anterior and posterior surfaces of the hand.

Severe extension in fractures or joint diseases is, I think, seldom necessary. What is required is a continued and moderate traction.

Reports of Hospitals.

MANHATTAN EYE AND EAR HOSPITAL.

CASES OF CATARACT.

REPORTED BY DAVID WEBSTER, M.D.,

HOUSE SURGEON.

TRAUMATIC CATARACT.

CASE I.—Service of Dr. Roosa.—W. S., æt. 20, brought to Dr. R.'s clinic by Dr. D. W. Fangboner, of Montana, N. J., June 29, 1871.

One week previous to his appearance at the hospital the patient had both his eyes injured by an explosion which occurred as follows:—

He was one of a gang of laborers in an iron mine; a hole was drilled in the solid rock containing the iron ore, and filled with gunpowder to a depth of eighteen inches; a fuse was applied and ignited in the usual manner, and all retired to a safe distance; but the thing did not "go off," and S. went to see what was the matter with it. While making his investigations, with his head about a foot above the charge, it exploded, and he was knocked senseless.

His family physician, after one week's careful and judicious treatment, brought him to Dr. R., in order to ascertain whether anything could be done to restore his eyesight.

When brought to the hospital he seemed to be an almost hopeless case, and, after a careful examination and consultation with Dr. Loring, Dr. R. gave a very grave and doubtful prognosis. The following was the condition of his eyes:—

No perception of light could be positively ascertained in either eye; the cornea and conjunctivæ of both were filled with particles of iron ore and gunpowder; there was iritis of both eyes, the pupils dilating only slightly to atropine; in the right eye there was traumatic cataract; the left eye was examined with the ophthalmoscope while the patient was under ether, and no reflex from the fundus could be seen, which showed the extreme probability that a hemorrhage had occurred into the eye, producing opacity of the vitreous body. There was intense and constant lachrymation and photophobia of both eyes, which shows that, curiously enough, light may give pain even where there is no appreciation of its existence.

The patient was at once taken into the hospital, and as many as possible of the foreign particles were removed while he was under ether.

Frequent instillations of a four-grain solution of the sulphate of atropia were commenced at once, and kept up while the patient remained in the hospital. Iced water applications were used until bedtime.

June 30.—Cupped on each temple and at base of occiput, and Dr. Agnew's black silk dressing applied. This was removed a day or two after and a shade substituted.

July 1.—Dr. R., starting for Europe, left the patient in charge of Dr. Loring. On the supposition that his sudden loss of perception of light might have been due to paralysis of the optic nerves from shock, he was put upon strychniæ, gr. $\frac{1}{48}$ *ter die*, and to be gradually increased.

July 2.—Has distinct perception of light in right eye.

July 9.—The dose of strychnia has gone up to gr. $\frac{1}{24}$. Patient complains of nausea, and burning heat in stomach and fauces. He was put to bed, and kept bits of ice in his mouth, and all unpleasant symptoms were relieved in a couple of hours.

July 11.—Commenced the strychnia again in the same doses as before. Pupils widely dilated, scleral injection mostly disappeared. Patient says he can see the floor at his feet.

July 15.—Removed a piece of iron ore from left cornea, which was so deeply embedded that the Graefe's knife entered the anterior chamber, and evacuated the aqueous humor at the same time with the removal of the particle. The right was explored while the patient remained under ether; but no foreign body was found.

July 24.—Dr. Loring having gone out of the city for a few weeks' recreation, the patient came into the care of Dr. Agnew, who at once diagnosticated detachment of retina of left eye, and, believing it to be a source of constant irritation of the other eye, advised its removal.

Aug. 11.—Enucleation of left eye was performed by Dr. Agnew, who afterwards demonstrated that a foreign body had entered the eyeball at a point near the insertion of the rectus internus. A reddish reflex could be seen from the whole fundus by ordinary daylight, both before and after the enucleation. When this eye was cut open by Dr. Curtis, Microscopist to the Hospital, some weeks later, it was found "filled with iron ore and gunpowder."

Sept. 18.—Dr. R., having returned from abroad, determined to attack the cataract in the remaining eye by discission. The needling was repeated more and more freely at each successive operation, five times, at the following dates:—Sept. 18th, Sept. 23d, Sept. 28th, Oct. 7th, and Nov. 27th. The treatment after each operation consisted of a shade, and frequent instillations of atropine. Very little inflammatory reaction followed any of the operations except the last, when the patient had some iritis, which, however, soon yielded to leeching and atropine.

Before the last operation, the patient could see through a little aperture in the remains of the lens, to find his own way about.

Dec. 21.—Counts fingers at eight feet.

Dec. 23.—$V = \frac{8}{9}$.

Dec. 26.—$V = \frac{1}{10}$ with + 4.

Jan. 25, 1872.—$V = \frac{2}{5}$, and reads Jaeger, No. 1, at nine inches, with + $2\frac{1}{4}$. Supero-nasal quadrant of pupil clear; the rest is mostly filled with opaque capsule.

On stopping the atropia, the pupil returned to its normal size; was perfectly circular and movable, and vision undiminished, so that further operative interference was considered unnecessary.

Jan. 29.—Dismissed with spectacles + $2\frac{1}{2}$ and + 4, frames reversible, having been under treatment exactly seven months.

CASE II.—Service of Dr. Agnew.—E. K., æt. 31, entered hospital December 8, 1870. V = perception of light.

Dec. 14.—Extraction, through linear wound in cornea, by grooved director.

Jan. 4, 1871.—Keratonyxis.

Jan. 19.—$V = \frac{1}{8}$ with + $\frac{1}{3}$.

CASE III.—Service of Dr. Agnew.—R. M., æt. 12, entered hospital May 6, 1870. The cataract is probably traumatic, since it followed a fracture of the *os frontis*, from a fall two years ago.

Jan. 6, 1871.—Keratonyxis.

March 1.—A second keratonyxis. No dressing was applied after either of those operations, but atropine was frequently instilled.

Aug. 2.—A third keratonyxis. The remains of the

lens was stirred up very freely at this operation, atropine and the flannel retentive bandage were applied, and the patient was directed to remain in bed until the next day, but he ran away home, unobserved, about two hours after the operation. He reappeared, however, three days later, and there had been no inflammatory reaction.

Feb. 9, 1872.—V = $\frac{3}{20}$ with + 4 for the distance. A thin opaque capsule is stretched over the area of the pupil. This capsule has several small openings through it.

Feb. 14.—A fourth keratonyxis. The needle was passed through the capsule, and by pressing it out towards the cornea, loosened it from the upper part of its peripheral attachment, and tilted it forwards on itself. Before applying the bandage the pupil seemed quite clear.

Feb. 15.—Has had no pain, slight scleral injection, pupil easily dilated. V = $\frac{1}{8}$ + for dist. with + 4.

Feb. 16.—V = $\frac{1}{4}$.

Feb. 18.—V = $\frac{3}{5}$. Pupil perfectly circular and movable.

SOFT CATARACT.

Case IV.—Service of Dr. Loring.—W. S., Englishman, carpenter, æt. 29, presented himself at Dr. L.'s clinic at the Brooklyn Eye and Ear Hospital, March 7, 1870.

In the right eye there were corneal opacities sufficient to reduce the vision to $\frac{3}{5}$.

There were also slight opacities of the cornea of the left eye, which, however, had always been his main dependence until about one year since, when, while working in a damp cellar, an inflammation set in which gradually reduced his vision, until now he is barely able to see a picture-frame across the room. Examination of this eye shows cataract with extensive synechiæ posterior.

The patient had also a slight conjunctivitis which was cured in a few weeks by touching the palpebral conjunctiva with alum, and by the use of sulphate of zinc washes, and he was advised to return for treatment of his cataract in about six months.

Jan. 5, 1871.—The cataract having matured, an iridectomy upwards was performed in order to obviate the danger of iritis, from the adhesions of the iris to the lens capsule. No inflammatory reaction of any importance followed the operation.

Jan. 30.—Keratonyxis.

Feb. 7.—The patient presents himself with a good deal of swelling of the lens and pretty severe pain. The tension of the eye being increased, a paracentesis was performed, and atropine and a compressive bandage applied.

Feb. 15.—The inflammatory symptoms soon subsided after the last operation, and the eye is now perfectly quiet.

May 9.—Entered as a patient at this hospital, and a second discission was performed without anæsthetic.

June 1.—A third discission, under ether—the lens was thoroughly broken up.

June 17.—A fourth needling without anæsthetic.

July 8.—A fifth keratonyxis under ether.

Sept. 5.—A sixth needling under ether.

Oct. 12.—A seventh needling under ether, making in all nine operations upon the eye. After all but three of these operations the flannel retentive bandage with charpie was used, and the patient went home as soon as he recovered from the effects of the ether. After the iridectomy, and after two of the needlings, Dr. Agnew's black silk dressing was used, and he remained a few days at the hospital. Atropiæ Sulph. gr. iv., to aq. ℥j., and colored coquilles, were used throughout the whole course of treatment.

Jan. 20, 1872.—About one year after the first needling, the lens is all gone, only some opaque capsule remaining.

Vision = $\frac{2}{7}$ with + 4 for the distance, and reads Snellen No. 2½ with + 2½ at six inches.

The patient was dismissed with spectacles + 2½ for L. E. and opaque glass for R. E., with instructions to read with L. E. five minutes every day in order to prevent amblyopia from disuse.

Case V.—Service of Dr. Agnew.—F. B., æt. 29, entered hospital November 3, 1869, and was operated upon by keratonyxis the same day. She had been operated upon by Dr. Agnew seven times previously elsewhere.

Dec. 11.—Needling for the ninth time.

May 28, 1870.—V = 1 with + 4 for distance.

Patient has a perfectly circular and movable pupil.

Dr. Agnew teaches that the ideal to be aimed at in the removal of cataract, whether hard or soft, is "good vision with a perfectly circular movable pupil." If we would have the latter we must carefully avoid setting up an iritis which, whether it results in adhesions of the iris to the anterior capsule or not, always impairs the mobility of the pupil.

The first keratonyxis in a case of soft cataract should be performed with a minimum amount of violence. A delicate needle should be used, so sharp that it can be introduced into the substance of the lens with the least possible force. The puncture should be made exactly in the centre of the anterior capsule, so that if the lens swell from absorption of aqueous it will enlarge symmetrically, thus avoiding undue pressure upon the iris at any point, the consequence of which would probably be a troublesome iritis.

The needle, having been introduced into the lens, should be gently rotated a few times on its longer axis, thus *drilling*, as it were, the lens through its centre, but no attempt should be made to "hash up" the lens, as is recommended in some of the books on surgery, as this would endanger straining or rupture of the suspensory ligament near the canal of Petit, an accident which is fraught with evil consequences. It might also produce so great a swelling of the lens as to give rise to a phakitis and an ophthalmitis which would eventually destroy the eye.

The second operation should be performed with almost an equal amount of care. In the third the lens may be stirred up a little more freely. After several operations the eye acquires a degree of immunity to violence, so that the lens may be stirred up more and more boldly at each succeeding operation.

The interval between any two of the operations should be, as a rule, from four to six weeks.

CAPSULAR CATARACT.

Case VI.—Service of Dr. Agnew.—J. E. A., æt. 37, entered hospital December 29, 1871. His right eye had been operated upon for soft cataract when he was 15 years of age, probably by needling. V = counts fingers at 8 feet with glass = 4. Pupil very sluggish, dilating only slightly to atropine, probably because of an iritis which followed the first needling.

Jan. 3, 1872.—Passed a narrow Graefe's knife into the anterior chamber, about half-way between the centre and upper margin of the cornea, piercing the obstructive membrane at one side of the pupillary field and enlarging the capsular wound in withdrawing the knife, carefully avoiding, however, an escape of aqueous. Dr. A. then introduced a sharp hook, and, after displacing the opaque capsule, or membrane, succeeded in

drawing out a portion of the same, snipping it off with the scissors. Atropine and black silk dressing were used.

Jan. 17.—The upper half of the pupil is clear; the capsule in the lower half shows a tendency to retract and curl on itself. V + ¼ with = 4 for the distance, and, with + 2½, patient reads Jaeger No. 4 at 8 inches.

Case VII.—Service of Dr. Agnew.—B. L., æt. 61, entered hospital April 28, 1871. A cataract had been extracted by corneal flap downwards, by Dr. Agnew, at the New York Eye and Ear Infirmary, 11 years previously. About one-third of the vitreous was lost in the operation, the cornea collapsed, and the tension of the globe was greatly reduced. The eye, however, was closed with isinglass adhesive plaster, and left so for thirteen days, no other dressing being applied. When opened, the eye was found plump, wound healed, cornea and pupil clear; and the resulting vision was so good that the patient continued to be able to read until lately, when the formation of a new membrane deprived him of useful vision.

April 28.—Keratonyxis, followed by retentive bandage and atropine *ter die.*

May 8.—Entered anterior chamber with an iridectomy knife, removed some of the opaque capsule by drawing it out with a sharp hook and cutting it off with scissors. Some vitreous lost. Retentive bandage.

May 28.—V = ⅔.

Reviews and Notices of Books.

Anæsthesia, Hospitalism; Hermaphroditism, and a proposal to stamp out Small-Pox and other contagious diseases. By Sir James Y. Simpson, Bart., M.D., D.C.L., late Professor of Midwifery in the University of Edinburgh. Edited by Sir W. G. Simpson, Bart., B.A., Scholar of Granville and Cain's College, Cambridge. New York: D. Appleton & Co., 1872.

The above papers compose the second volume of the papers of the late Sir James Y. Simpson. Many of these articles are contained in the Obstetric Memoirs and Contributions which were edited by Drs. Priestly and Storer, some years since; while others are only to be found in the different foreign journals, chiefly, perhaps, in the *Edinburgh Monthly Journal of Medical Science.* Nowhere in the whole range of medical literature can the subject of anæsthesia be found so fully treated upon as in these papers of the great obstetrician. The article on Hermaphroditism consists of the well-known paper on this subject which he contributed to the *Cyclopædia of Anatomy and Physiology.*

With respect to that portion of the work referring to the subject of hospitals, it can not only be read with benefit by those of our profession who serve these institutions, but it would be well were it studied by the laity who build and govern our public hospitals, too many of whom are but rearing those massive structures within narrow enclosures, against which our author contends, and with great justice.

This work comes to us in a pleasing shape, and will, no doubt, be properly appreciated by the reading portion of the profession.

Spectrum Analysis is the title of a volume—No. 7, University Series—published by Charles C. Chatfield & Co. New Haven, containing three popular lectures on "Spectrum Analysis," delivered recently at Manchester, England. by Professors Roscoe, Wm. Huggins, and J. Norman Lockyer.

The application of the discoveries in spectrum analysis to the earth and sun is plainly shown by Professor Roscoe. Professor Huggins tells us of his ability to discover the composition of the stars, nebulæ, and comets, in his lecture on "Spectrum Analysis, in its application to the Heavenly Bodies;" how these distant bodies have a community of matter with the earth; that the matter of which they are composed is of the same order as that of the earth; that it is subjected to the same force—the force of heat; and that it emits light in the same way as terrestrial substances.

In connection with well-defined illustrations of the sun, Prof. Lockyer explains—by literally taking this body to bits with the aid of the spectroscope—the spots filled with burning sodium, the space outside of the sun (built up of hydrogen, and seen in red flames during an eclipse), and the velocity of various currents. He believes, with others, not only "that we have evidence that the sun is rotating like our earth, but that the atmosphere of the sun is subjected to most tremendous storms; storms so tremendous, that the storms on our earth are not for one moment to be compared with them."

These lectures, in a condensed form, give all that is known on this subject: and the publishers of this scientific series, in presenting the advanced thought of the age in a cheap form, are entitled to the thanks of our countrymen who are interested in the new science of spectrum analysis.

Animal and Vegetable Parasites of the Human Skin and Hair. By B. Joy Jeffries, A.M., M.D., Fellow of the Mass. Med. Society; Member of the American Ophthalmological Society; Ophthalmic Surgeon to the Mass. Charitable Eye and Ear Infirmary; Ophthalmic Surgeon to the Carney Hospital; Lecturer in Optical Phenomena and the Eye, at Harvard University; late Lecturer on Diseases of the Skin, at Berkshire Medical College. pp. 102. Boston: Alex. Moore.

From a gentleman with so many titles and of such varied experience, we had a right to expect a solid contribution to the somewhat limited literature of parasitic diseases. Instead, we find a popular treatise, which appears to be an effort, on the part of the writer, to advertise himself or his specialty. Upon page 73 he justly remarks, "that there are enough medical men who do not advertise, and yet are arrant quacks; but it is still truer that all those who do, in any form, are sure to be impostors." In contrast to this, he invites (p. 24) those who suffer from lice to consult "those who have made diseases of the skin a special study," and again (p. 27), to consult "some physician who pays special attention to diseases of the skin." Upon page 50 he condescendingly remarks, "that want of immediate success" in the treatment of itch by general practitioners "should not tell against them," and on page 53, kindly informs the public that "those who make a specialty of cutaneous medicine, fortunately, nowadays, have a large choice of substances and methods of application" for the treatment of this affection. Upon p. 49 he announces himself a "Dermatologist." We blush for Dermatology if it requires such advocacy. Its claims as a useful and legitimate specialty should first be established to the satisfaction of the profession. When that is done, its public recognition will not be long delayed; but we most earnestly deprecate any direct and urgent appeals to the public in favor of this or any other special branch, as savoring too strongly of charlatanism.

Of the scientific merits of the book we regret that we can say but little. Upon page 44, he speaks of the "true skin, or *rete mucosum*," as synonymous terms,

which is a usage peculiar to our author. Upon page 63, he says that "absolute loss of hair from the whole surface of the cutaneous envelope may be caused by vegetable parasites," a statement which, we fancy, he would find some difficulty in proving. On p. 79, he states that *alopecia areata* is a parasitic affection; a view first promulgated, we believe, by Bazin, but not confirmed by subsequent observations. The spores of parasites of this disease, our author says, are "infiltrated through the hair, rendering it so brittle as to break off close to the skin." This *is* the case in *tinea tonsurans*, but not in *alopecia areata*, in which the hairs fall out instead of breaking off. On page 81, he attributes the production of sycosis to the *micro-sporonmentayrophtes*. It is rare to discover in this affection any parasitic growth, but when found it proves to be the *trichophyton tonsorans* of Malmsten, and not the one previously named, claimed to have been discovered by Gruby. But enough: the book, on the whole, does not afford evidence that the author has sufficiently availed himself of the recent advances in the pathology of diseases of the skin; and in the interests of science and of dermatology we sincerely regret its publication.

A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M.D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York; Physician to the Roosevelt Hospital, New York; Attending Surgeon to the New York State Women's Hospital, etc., etc., etc. Third Edition, Enlarged and thoroughly Revised, with Two Hundred and Forty-Six Illustrations on Wood. Philadelphia: Henry C. Lea. 1872.

This third edition of Prof. Thomas's work appearing so soon after its predecessors, argues a high appreciation of its value on the part of the profession. To this judgment the author responds by a very careful revision, in which he has incorporated the results of his rapidly increasing clinical observation, and an abstract of whatever contributions have been made by others to gynæcology within the last two years.

As compared with the first edition, five new chapters on dysmenorrhœa, peri-uterine fluid tumors, composite tumors of the ovary, solid tumors of the ovary, and chlorosis, have been added. Twenty-seven additional woodcuts have been introduced, many subjects have been subdivided, and all have received important interstitial increase. In fact, the book has been practically rewritten, and greatly increased in value.

The plan of the work is arranged in reference to the uses to which it is destined, as an introductory textbook for students, and a manual of ready reference for practitioners. The latter necessity has entailed a certain amount of repetition in the separate monographs, which somewhat impairs continuity of interest to the expert, and renders it less elegant than the classic pages of Gooch and Wright. This is, however, a wise sacrifice, for whoever, under the spur of a present occasion, consults any chapter, will find its subject there, sufficiently spread before him for ready comprehension. Very full use has been made of all the literature of the subject. Greek, Roman, Arabian, British and Continental, and particularly German authors, have been thoroughly studied, abundantly quoted, and scrupulously credited with all obtained from them. His American colleagues, Emmet, Peaslee, Hodges, Atlee, Noeggerath, Sims, White, Mettauer, Barker, Elliot, Byrne, Byford, Bozeman, Taylor, Kammerer, and many others are treated with generous appreciation and perfect courtesy.

Very little space, however, is given to the tedious claims of priority which sometimes disfigure medical literature, and degrade rather than exalt the parties involved. While thus careful of the credit and respectful to the authority of others, there is always a graceful and firm respect for his own analysis of testimony, and the value of his own observations and reasoned convictions. Alike in his oral and written work, Dr. Thomas discovers his eminent fitness for the position he occupies as a teacher. His method of investigation and elucidation are those of a well-disciplined and naturally logical mind. In approaching a subject he first subdivides the field, and searches with acute and patient scrutiny for all phenomena in each division. These he traces to their antecedents and follows to their consequences. Thus he constructs or sometimes postulates his positions and then verifies them by a careful review of the facts. Thus he arrives at positive and symmetrical conclusions, which are as final as the state of science allows, and can at any rate sustain attack and resist dogmatic denial.

The method of his book is itself a lesson in general education. It ignores all brilliant intuitions, and all distorted or partisan aspects of truth, and proceeds by accurate observation and fair induction. In his aim to be comprehensive he naturally at times becomes transcendental, and in his desire to be historical he sometimes lends his sanction to obsolete methods.

In its *morale* and good taste the book is excellent. Of personal display there is nothing which a severe modesty would condemn. There is a pleasing absence of bibliographical parade, and no rhetoric or fine writing. There is neither coarseness nor sentimentalism, nothing which a good mother would regret to have her medical cadet read. Perhaps some of the wood-cuts of procidentia, etc., might have been spared on this score, and yet they are not particularly objectionable. Specially to be commended, under the head of the *morale*, are occasional passages in which the author not only admits, but explains and defines by just limits, the difficulties and disappointment which await the practitioner in this field; from which he claims no personal exemption, and does not hesitate to detail his own experience for the guidance and encouragement of others. For example, we will cite passages from the section on prognosis, in the 12th chapter, on general uterine therapeutics.

Speaking of the time within which cure may be promised, he says:—"The answer to this question, not in the lesser interest of the practitioner, but in the greater one of the patient, must (often) be, that no such time can possibly be determined upon. In some cases it becomes necessary to state further that not only is the time, but the certainty of complete cure doubtful: that local treatment will cause pain, may result in danger, and may absolutely aggravate the existing symptoms." Again: "A patient has been persuaded by her husband, mother, or friends, contrary to her own wishes, to submit to treatment. She utterly repels the course to be adopted, is sure that it will do her no good, is unwilling to fulfil the directions left for her daily guidance, but yields under the assurance of her advisers that the treatment will be free from discomfort, and will surely cure her in a few weeks. The physician, for the sake of his patient and himself, should avoid joining in the deception. Stating the facts fully to her, telling her of the danger which neglect will involve, and of her duty under the circumstances, he should appeal to her reason and decline to take charge of the case until she really desires his services."

It is beyond question that, in the community at large, the good report of Gynæcology and of its experts would stand far higher and fairer if this simple rectitude had not been so often deviated from.

Of special criticism we have little to offer, but may note a few points which have attracted our attention. The formula for recording cases given upon page 60 is good in itself, but more valuable in reminding the practitioner that if he is ever to use his own experience and observations, he cannot afford to trust them to the tabula rasa of professional memory. In his chapter on Specula the author has not included Dr. I. E. Taylor's modification of Cusco's instrument, which we have found thoroughly available for all examinations except those of portions of the vaginal wall. We consider it the most simple, compact, cleanly, painless, and expeditious instrument. Neither is mention made of Byrne's ingenious combination of Sims', Pinkham's, Nott's, and Cusco's, or rather of his original instrument, which appears and is said to combine the advantages of those several instruments. Each of these specula allows the practitioner to dispense with an assistant, and, as nine-tenths of physicians will treat nine-tenths of their respective patients thus, the choice of an instrument becomes an important matter. The author praises the slender silver wire probe of Sims in comparison with the copper sound of Simpson. In this our personal experience differs. We have found it very apt to engage in the rugæ of the cervix, and to balk at the valve of the os internum, while its extreme pliability renders it less reliable as a measure of the length of the body and the inequalities of its internal surface. All know that a No. 6 sound irritates the urethra more than No. 16. Of course the wire will follow the contour of an intruding fibroid better than the larger instrument.

In the remarks upon dilatation of the cervix by tents, the merits of the sea-tangle, as compared with the sponge, are more fully recognized than in previous editions. For digital exploration, one or the other will remain indispensable; but for the ordinary purposes of injection and ingestion, the graduated metallic dilators of Peaslee or Kammerer are sufficient, more expeditious, and, we believe, more innocent. Dr. Thomas indicates how well he appreciates the dangers of the sponge process by the disasters which he details, and the elaborate scheme of rules for avoiding them. It is certain that, however safe they may be when guarded by such intelligence and caution, occasions for their use should not be needlessly multiplied. To the treatment of vaginitis, specific or granular, might have been added the ectrotic method, which seldom fails to cure by a single application, if employed early enough.

The vagina should be cleansed by an injection of warm water; a cylindrical speculum, as large as can be used without pain, introduced, and through it a soft fine sponge, thoroughly soaked in a 30 grain solution of nitrate of silver, and all the excess pressed out, should be passed to the cervix, and held there while the speculum is withdrawn. Then by turning the forceps over and over the sponge may be removed, describing a slow spiral movement, and every portion of the vagina is reached by the escharotic. Injection of cool water and rest should follow. Chapter X. contains a very complete *résumé* of the early literature of urinary fistulas, and, as it seems to us, a very impartial adjudication of honors in the matter. It is made to appear that the posture, the levator speculum, the metallic suture and the retained catheter, which Dr. Sims combined in 1852, and by which he attained a success till then unknown, had each been previously employed, though probably without his knowledge. Gosset of London is here said to have proposed or employed the combination of all these features as early as 1834. In speaking of these as "the essentials of success" the language of Professor Thomas appears too strong, inasmuch as eminent success has been attained by operators who have discarded each and all of them. Thus Simon of Heidelberg discards the semi-prone position, prefers very fine silk sutures to silver, and does not use the self-retaining catheter. Recent experiments on the Continent, and the experience of Noeggerath and Byrne in this country, go far toward establishing the fact that irrigation by healthy urine does not at all interrupt or delay the process of healing by adhesion or granulation. If these views are accepted they will obviate the use of the catheter, which is understood to be the most annoying and disagreeable feature of the after-treatment. These remarks will also apply to operations for restoration of the perinæum. The contact of the lochial discharge is probably equally innocent, and the proposition of Prof. Thomas to avoid this by prone recumbency, while it is likely to be nugatory, is certain to be too tedious for maintenance. The operations, now methodized, of Parker and Emmet for the cure of cystitis in the female, by an artificial fistula maintained for a sufficient period, are barely alluded to, although furnishing occasion for an incorrect statement, by way of illustration, about perforation of the tympanum (*Qu. membrana tympani*), of which it is said "that the closure of openings the result of disease is impossible." We venture to say that scores of such openings have closed under Dr. Thomas's own observation.

Chapter XII. has been re-written, is very elaborate and judicial, and its force is directed toward the substitution of the term areolar hyperplasia for chronic metritis, diffuse interstitial, parenchymatous, &c., &c.

This discussion tends toward sharp definitions, and therefore has a positive though somewhat remote value. The name proposed is drawn from morbid anatomy rather than from clinical observation, and yet our clinical is greatly in advance of our pathological knowledge of the subject.

In the following chapter on acute endometritis, and often elsewhere, when discussing inflammatory states of the uterus and appendages, the author seems to lay much stress upon maintaining a constipated condition of the bowels. This doctrine seems to us liable to abuse. Granting that cathartic derivation is needless and mischievous, it is equally true that an impacted colon and rectum mechanically displaces and irritates the organs, conduces to hyperæmia by obstructing return from the hemorrhoidal veins, and tends to keep up a slight but continuous peristalsis. We believe that the lower bowel should be evacuated, in the most gentle manner, by mechanical means, as often as once in two or three days. Small enemata of solution of ox-gall to liquefy, and larger lavements of warm mucilaginous fluid to bring away the contents of the intestine; thereafter a suppository of morphine (¼ to ½ gr.), will soon restore tranquillity to all the pelvic viscera, giving them more space, more rest and less heat. The section upon uterine injections is a fair illustration of the general excellence of the work. The value and the danger of using them are sufficiently stated, but no space is wasted in declamation on these points; the author passes at once to the practical question—when and how they may be safely employed, for which he gives a complete and sufficient scheme of rules. In the treatment of areolar hyperplasia, Dr. Greenhalgh's formula for preparing iodized cotton is introduced. We think this formula is ideal; drying cotton saturated with glycerine will be found a difficult process: the cotton will *not* dry and the iodine *will* evaporate. If the glycerine be replaced by water simply a satisfactory

preparation will be obtained, or the iodine may be vaporized and the fumes collected in loosely-picked cotton.

The agency of iodine in securing resolution of hyperplasia, whether in the cervix or in the body, has been at times so marked, and again so inefficient, that we have conjectured, and find a considerable amount of evidence to show, that it is most useful in those cases where a syphilitic element governs the proliferation. In the management of displacements Dr. Thomas represents the settled judgment of the great majority of experts in regarding the use of pessaries as of prime value. The key-note of their successful use is struck in those passages where Dr. Thomas says that the operator should have at his command many varieties in size and shape, that they should always give relief rather than pain, and should be closely watched so long as they are worn. The subject is too full of detail for discussion here; it is very fully elucidated in the text, and we dismiss it with the remark that the favor of the profession is, we believe, decidedly turning toward those instruments which do not distend the vagina, and which do provide external fulcra for internal support.

The operation for the relief of the consequences of anteflexion by section of the posterior lip is fully described, but not recommended with enthusiasm. It would be proper to say further that it has been practically abandoned by its original promoters, as failing to maintain permanent advantage, while, as Dr. Thomas justly says, its performance has been attended by a ghastly list of casualties. The chapter on Dysmenorrhœa is a model in its clear separation and differentiation of forms and specific adaptation of treatment. The study of malignant and semi-malignant diseases of the ovaries, to which the author has made very valuable original contributions, is very well presented. Ovariotomy also, in which Dr. Thomas is rapidly attaining the first rank of operators, is fully considered and finely illustrated. Many other portions of the book are equally worthy of notice, did the limits of this sketch allow. Of slips and inadvertencies there are very few. "*Sed aliquando bonus Homerus dormitat.*" On page 406 the Sage of Cos is represented as speaking in the Latin vernacular. We don't believe he did; but if so, hope that he did not use such an epicene variety as appears on p. 207. Briefly, we may say that we know of no book which so completely and concisely represents the present state of Gynæcology; none so full of well-digested and reliable teaching; none which bespeaks an author more apt in research and abundant in resources. When, in the near future, a *fourth* edition of this now standard text-book shall be called for, we shall hope to find in it a chapter on puerperal affections of the uterus, and a *résumé* on uterine electrical therapeutics.

Progress of Medical Science.

The Use of a Hemp-Saw in Excision of Polypi.—At a recent meeting of the Dublin Obstetrical Society, Dr. McClintock and others spoke of the use for this purpose, and also for the decapitation of the child *in utero*, of a hemp or silk cord to which a sawing motion might be imparted after it had been passed around the neck of a child or pedicle of a tumor. No hemorrhage had, thus far, resulted from its use in cases of the latter description, for which it was more easy of application than the écraseur. The President, Dr. Kidd, showed the body of an infant, for the delivery of which decapitation had been necessary, the neck having been severed by this process in less than a minute and a half.

Treatment of Retention of Urine from Stricture.—Dr. P. A. O'Connel suggests, in *The Lancet*, a novel mode, which has succeeded several times in his hands, of overcoming the impediment of a stricture. The mode consists in attaching a syringe, or rubber ball, to the end of a catheter, so that suction can be made, the end of the catheter, which is passed down to the stricture having an opening at its extremity. He cautions those who may attempt this measure against the use of much force, on account of the delicacy of the tissues composing the urethra.

Re-Implantation of Teeth.—At a recent meeting of the Odontological Society of England, Mr. Steele called the Society's attention to this subject, and stated that he recently had a tooth of his own extracted with great care. The tooth was in an exquisitely sensitive condition from exposure of the pulp, and gave pain on the least change of temperature. It was taken out under the influence of nitrous oxide gas; the dental canal was cleansed, and the carious portion of the crown was removed. After being stopped in the usual way, the tooth was replaced in its socket, the operation having lasted about half an hour.

The Pathology of Painting.—Prof. Liebreich (now lecturer on ophthalmology at St. Thomas's Hospital) recently gave at the Royal Institution a demonstration before a scientific audience on the effects of certain faults of vision on the style of artists, with special reference to Turner and Mulready. This ophthalmologist, who is himself something of an artist, has, in studying the various periods of Turner's style, arrived at the conclusion that the later aberrations which some *connoisseurs* have affected to admire were demonstrably the result of a physical change in the refraction of the eye, by which illuminated points were abnormally converted into luminous lines. Tracing the advance of the disease by the increasing eccentricities of pictorial effect, he has been able repeatedly and with accuracy to date precisely the pictures and sketches of the later period by this means of purely optical, and, so to speak, medical diagnosis; and, by producing a similarly aberrant dispersion of light, has been able to demonstrate to the spectators the conversion of the pictures of the earlier into those of the later style of the great artist. In the case of Mulready, M. Liebreich has determined that the so-called change in manner which marked his later pictures, and which was characterized by an excessive prevalence of purple tints, was due to increasing yellow degeneration of the crystalline lens of the painter's eye; and that, by the use of a corrective yellow glass, the color of his latest works may be brought into strict accordance with that of his earlier paintings. A subject which he painted twice—once in middle life, and again in his later years—will also, by a simple optical contrivance, afford an opportunity of demonstrating this.

Poisoning by Vanilla Ices.—The German Medical journals call attention to the circumstance, that several cases of poisoning by vanilla ices have in late years occurred in Paris, Altona, Munich, Vienna, and other places. Mauver has recently related an instance in which, after the use of this ice, a large family suffered from the symptoms described as having been present in the other cases; viz., frequent vomiting and diarrhœa, assuming, in some of the patients, a choleriform character. All of the patients recovered. What the nature of the poison is has not yet been ascertained. In two observations on the remaining portions of the poison-

ous ices, traces of iron, lead, and tin were present; but the combination of lactic acid with oxide of tin has been ascertained not to be poisonous. Schroff believes that the poison is produced by the use of the cashew-nut oil to besmear the vanilla-pods.

The Bavarian Method of Using Plaster-of-Paris in the Dressing of Fractures is described in the *Medical Times and Gazette* of Feb. 14th; a yard of the cheapest flannel, a pound or thereabouts of plaster-of-Paris, a few large pins with their heads beat at right angles to the shaft, and a piece of calico or common roller, being all the apparatus required in the case of a fractured leg, for example. The flannel is cut into two rectangular pieces, the length of the fractured bone, and broad enough to encircle the limb and leave an overlapping margin, one piece being a little wider than the other. Placing the narrow one evenly over the other, they are to be sewn together by longitudinal stitching down the mesial line, and now resemble two sheets of note-paper stitched together at the fold, the outer one being a little larger than the inner. Raising carefully the limb to be dressed, the flannel is to be spread smoothly under it, taking care that the line of sewing corresponds to the posterior mesial line of the limb. The two edges of the inner piece are now brought evenly over the limb and fastened together by means of the bent pins, leaving the outer sheet spread on the surface of the bed or table. Exact coaptation of the fragments having been secured, the plaster, having been mixed to a proper consistence with water, is partly smeared and partly poured on. The two outer sheets of flannel are rapidly brought over the surface of the plaster (which is now caught on both sides between the inner and outer layers), and are held together at their margins till the plaster sets, taking care that the extension and counter-extension of the limb are kept up steadily during that period. The pins must now be taken out (it being for this purpose that their heads were bent), the edges trimmed, a few turns of the roller applied, and the operation, which need not occupy more than ten minutes, is finished.

A most important advantage connected with this dressing is the facility with which it can be removed. When the bandage is taken off, the two opposite sides of the splint can be separated, like the bent covers of a book, the line of stitching, which prevents the running together of the plaster, acting like a hinge.

An Extensive Nævus.—Dr. Geo. H. Hubbard, of Lansingburgh, N. Y. (*Trans. Med. Soc., N. Y.*, 1870), records an extensive case of nævus in the person of a Lancashire, Eng., engraver, aged 40 years. The tumor measured about twelve inches in length and eight in breadth, and extended from the second dorsal vertebra nearly to the crest of the ilium, and appeared to be about two inches at the most prominent part. It was ligated successfully, but, seven months after the operation, the patient died, exhausted. This nævus is the largest of which he has obtained a knowledge; and, after a mature consideration of the whole subject, he has decided that very large nævi should be let alone.

Lithotomy and Lithotrity.—These subjects, illustrated by 45 cases in the practice of Gurdon Buck, of N. Y., are discussed *in extenso* in the *Transactions of the Med. Soc. of the State of N. Y.*, 1870, which has just made its appearance.

Of the 45 patients whose cases are herein reported, 41 were males and 4 females. The ages of the males varied from 5 years to 85; of the females, from 25 to 56 years. Of those subjected to the operation of lithotrity, the youngest was 17 years old, the oldest 85 years. The ages of those subjected to lithotomy varied from 5 years to 65. New York City contributed 25 of these cases. The mortality after lithotrity in the aggregate cases was 9 in 55, or in the proportion of one in six and one-ninth cases. The only fatal case after lithotomy more properly belonged to the account of lithotrity, inasmuch as after several repetitions of lithotrity, the patient's condition became such as already to portend a fatal issue, when the operation of lithotomy was resorted to, as a desperate alternative.

The conclusions to which the author's own experience has led him may be stated as follows:—For patients under 17 years of age, lithotomy is to be preferred. The only exception admissible to this rule might be a case not under 10 years of age, in which a stone was ascertained, by measurement with a lithotrite, not to exceed one-half to three-fourths of an inch in diameter; and which might very probably be gotten rid of by a single operation.

In adults, with a moderate-sized calculus co-existing with a favorable condition of the urinary organs and general system, lithotrity is to be employed; also where a like favorable condition of the local organs and general system co-exists with a calculus of large size, but not of hard consistency. Lithotomy should be preferred if a calculus be found to be very hard, and to measure one inch or more in diameter. Great difficulty in passing the neck of the bladder with the lithotrite, whether from enlargement of the prostate or from a fixed position of the stone itself, should deter from the employment of lithotrity. In a debilitated or reduced state of the system from purulent cystitis and protracted suffering, irrespective of the size of the stone, lithotomy should be preferred. In a case of stricture of the urethra, its complete cure should be a preliminary step to the employment of lithotrity.

Successful Applications of Spier's Artery Constrictor.—Dr. Chas. A. Hart, N. Y. (*N. Y. Med. Journal*), relates eleven cases of amputation, aneurism, etc., in which applications of Dr. S. Fleet Spier's artery constrictor were successful. The practical points which this constrictor presents over the ligature, he says, are: 1st. Its greater certainty of permanently controlling arteries in a healthy condition, as well as in extreme states of disease. 2d. The wound being free from any absorbing or retaining agent like the ligature, in which discharges can decompose, there is less liability to septæmic poisoning. 3d. The wound being entirely free from any foreign body, there will be a greater probability of obtaining primary union, which we can materially assist by hermetic closure of even as large wounds as in amputation of the thigh, by covering the entire stump with collodion. 4th. Far less liability to secondary hemorrhage when applied to a vessel in its course. Should the invagination of the coats or clots give way, the current of blood will simply flow on in the old channel, and not exsanguinate the patient as in secondary hemorrhage after the ligature.

Cancer.—At a recent meeting of the Chicago Medical Society, Dr. N. S. Davis (*Chicago Med. Examiner*) alluded to two cases of cancer in which he had used cundurango with negative results, and said further that, though it was generally believed that with our present resources we are incapable of retarding the progress of the disease, he felt certain that he had seen several cases in which no progress had been made after treatment was commenced. Two of these he reported in detail. In one case, bi-chloride of mercury and conium internally, and stramonium ointment locally, were prescribed. The patient improved steadily, and finally became able to perform her usual labor. In the other

case, conium and arseniate of soda were administered, and the morbid growths slowly and gradually disappeared. Dr. D. withholds animal food in treating cancer, and continues medication after removal by operation for at least a year.

Acid Nitrate of Mercury.—Drs. Warner and Storer, of Boston, Mass. (*Journ. Gynæcological Soc.*), advocate this remedy in cases of hypertrophied and exceedingly indurated wombs. The latter gynæcologist formerly considered the agent dangerous and unreliable, but from experience he has become a firm believer in its use. A lady who had been married for many years without conceiving consulted them on account of an hypertrophied uterus. For several months, while in St. Francis' Hospital, an intra-uterine application of this acid was made, half way between the menstrual periods; under this treatment the womb rapidly contracted in size, and its walls became supple and natural. She is now far advanced in gestation.

Temperature Observation during Menstruation.—Dr. Hennig (*Journ. Gynæcological Soc.*) communicates to the Leipsic Obstetical Soc. his experience in Temperature Observation during Menstruation. For these experiments three persons were selected; two of them young women, 18 to 20, and a married woman who had had children. The subjoined results were obtained: Four to five days before the catamenia, the heat of the body rose from 37°.4 to 37°.6 (Cels.); then fell from 37°.7 to 37°. At their appearance the temperature rose from 37°.4 to 37°.5, fell shortly before cessation to 36°.4 and 36°.6, and remained at 37° during the cessation.

The same experiments, with similar results, were made six months later. The conclusions drawn from the above are, that a mature woman exhales much less carbonic acid by the lungs than a man, and only a little more than a girl before puberty.

Uterine Anomaly.—Dr. Hennig, at a late session of the Leipsic Obstetrical Society (*Journ. Gynæcological Soc.*), reported in brief a case of uterine anomaly in a girl 14 years old, in which, instead of the uterus, there was a shallow pocket two centimetres deep.

Removal of Non-Syphilitic Condylomata, or Warts.—Dr. Dubois, Lecturer on Diseases of the Skin, Univ. of Penn. (*New Remedies*), advocates "Rochard's Ointment" as a mild caustic to remove non-syphilitic condylomata or warts. ℞ Iodine pulv., gr. vij.; Hydrarg. chlor. mit., ʒj.; Adipis, ʒij. Misce unguentum.

Irreducible Hernia.—Prof. W. W. Dawson, of the Good Samaritan Hospital, Cincinnati, Ohio (*The Clinic*), recently exhibited a patient, aged 64, pedler by occupation, with an enormous double scrotal hernia,—reducible on the right, irreducible on the left side,—to impress upon his class the importance of an immediate and permanent reduction and the early application of the truss in these cases. A wood-cut accompanies the description of the case. The size of the scrotum was immense—measuring 13 inches in length and 27 inches in circumference. Prof. Gross reports a case 12 inches in length and nearly two feet in circumference. In closing, Dr. Dawson, in speaking of the justifiable use of the knife in cases of irreducible hernia before attaining great size, remarked that it was justifiable in some cases.

Treatment of Stricture.—Prof. W. W. Dawson, of Cincinnati, Ohio (*The Clinic*), in a lecture on "Stricture," suggests the following rules for the guidance of the practitioner:—1st. *Dilatation*, for all uncomplicated strictures which can be passed by a sound. 2d. *Internal Urethrotomy* for all strictures complicated with great irritability of the urethra or obstinate contractile tendency—those cases, in fact, for which Syme recommends perineal section. 3d. *External Urethrotomy*, or *Perineal Section*, for all strictures associated with urinary fistulæ.

Subdivision of Otitis Interna.—Dr. H. Knapp, of New York (*Reprint from Archives of Ophthalmology and Otology*), thus subdivides otitis interna:—1st. *Hæmorrhagic:* sudden and traumatic deafness. 2d. *Serous exudative*, or *simple:* idiopathic Ménière's disease, and the deafness from syphilis, severe fevers, acute exanthemata, erysipelas, and other constitutional diseases. 3d. *Purulent:* a *primary* disease of traumatic origin, perhaps also spontaneous and sui generis (*Voltolini*), and *secondary* in simple and cerebro-spinal meningitis, puerperal fever, and other pyæmic diseases.

Dr. Knapp states that the treatment of the labyrinthine affections is still more in its infancy than is its pathology. Antiphlogosis and derivation, both locally and constitutionally, with due regard to the nature of the general symptoms, are indicated in all recent cases. Electricity was employed in nearly all his reported cases, but without a shade of improvement. If the increase of intra-auricular tension were better known as a fundamental and detrimental symptom in certain inflammations of the inner ear, we should endeavor to get access to the cavity of the labyrinth with proper instruments, perhaps best by one of the fenestræ, in order to evacuate a part of the perilymph.

Force and Version in Labor.—Prof. Hugh L. Hodge, of Philadelphia (*Am. Jour. Med. Sciences*), in an article "On the Synclitism of the Equatorial Plane of the Fœtal Head in Pelvic Deliveries," affirms that two results are apparent: *First.* That simple tractile force should not be the sole recourse of the practitioner, but that flexion of the head should be insured and maintained. *Second.* That the operation of podalic version should always be regarded not as one of choice, but as one of necessity. It is fraught with danger to the infant and to the mother in all complicated cases; it demands great skill and experience for its execution; numerous and often unexpected difficulties are apt to be interposed, and yet the time allotted is exceedingly short. The whole process of descent must be accomplished in a few minutes, or the child, for whose benefit these risks are incurred, will perish.

Cauterizing Venereal Sores.—Dr. J. D. Rogers, of this city, believes the following to be a decided improvement on the present method of cauterizing venereal sores, as it causes little or no pain, and seems to give quite as favorable results. First, saturate the sore with a solution of carbolic acid (gr. xx. to. aq. ʒj.), using a brush, or atomizer, the latter being preferable; then touch the part with pure carbolic acid, followed by pure nitric acid. The above has given him entire satisfaction for nine or ten months past, and, he doubts not, will be valued by those who choose to try it.

Insanity.—S. T. Clark, A.M., M.D. (*Am. Journ. of Insanity*), pertinently discusses the case of Aratus F. Pierce, defended on the plea of insanity (mania transitoria), and observes that those individuals who are predisposed to insanity are not to be considered in the class of those who commit crimes while laboring under an attack of *mania à potu*, for the drunkard is supposed to be sane when he takes into his system a toxic agent which he knows will deprive him of his reason and judgment; but the law has always recognized the fact that ignorance of the effects of alcohol, opium, and other drugs affecting the intellect, changed the moral relation

of the individual to society; and the insanely-predisposed are more nearly related to the latter than the former class.

Every individual with the insane predisposition, who has ever labored under an attack of mania transitoria, should be required to avoid all exciting causes and to hedge himself about with all possible protections against recurring attacks, and doubtless, in the event of a second plea of mania transitoria in defence of the same person charged with a capital offence, the question would be properly raised, whether the individual, knowing his unfortunate mental organization, had so avoided causes likely to provoke the insane state, and had as thoroughly deprived himself of the facilities and opportunities for committing crime as his former warning would suggest, and his circumstances permit.

Ophthalmological Examination of Sixty Insane Patients.—Dr. Henry D. Noyes, of N. Y. (*Am. Journ. of Insanity*), by request of Dr. Gray, has made an ophthalmological examination of 60 insane patients taken from the wards of the State Asylum of Utica, N. Y. Of these, 11 were cases of General Paresis; Dementia, 18 cases; Mania, 26; Melancholia, 5 cases. In the first series, with the exception of two, there was hyperæmia and infiltration of the nerve and retina. The uniformity in the aspect of the fundus oculi was so considerable that he soon learned to suspect from ophthalmological appearances what was the nature of the patient's malady. He does not wish to be understood that he can thus diagnosticate general paresis. In 12 cases of dementia, the optic nerve and retina exhibited hyperæmia or infiltration; in 6 they did not. In searching for peculiarities among these cases, while there was nothing like uniformity in the ophthalmoscopic appearances, the preponderance of hyperæmic cases is noted. The torpid condition of the cerebral nerve substance would appear to be reflected in the intraocular circulation. The cases of acute and subacute mania are considered together; among the 20, 14 exhibited hyperæmia of the nerve and retina; in 6, these tissues were either normal or anæmic. It is not assumed that the vascularity of the nerve is always an index of the circulation in the hemispheres; but he suggests that the variety found in the appearance of the optic nerve accords with the view that mania is the result of exhaustion of nerve-force, as well as of over-excitation. Of 6 cases of chronic mania, 3 showed signs of inflammatory action or hyperæmia in the optic and retina, and 3 showed no lesions. In the 5 cases of melancholia, only 1 case exhibited any evidence of abnormal condition within the eye.

His conclusions are as follows: The ophthalmoscope may help us during life to arrive at some knowledge on this vital subject; but the necessary limitations of its power of penetration must be borne in mind. First, that it shows only one of the prolongations of the brain, which may not be involved in the brain lesion. Secondly, the magnifying power yet obtainable is too small to show the intimate texture of the optic nerve and retina; as in the brain, it is impossible often to see the true lesions without the higher power of the microscope; so, for the optic nerve, we need much greater power than we yet have in the ophthalmoscope. But, despite these restraints upon its capacity, it shows these important facts: Atrophy of the optic nerve not infrequently precedes disorders of the brain and spinal cord, and sclerosis may be the pathological change at the foundation of all the lesions. Again, retinal hemorrhage may be the precursor of cerebral hemorrhage. It is also true that serious lesion may exist in the optic nerve and retina without any damage to sight. In the case of the insane, it is important to question them closely as regards the degree of sight, and make them fulfil the proper test by test letters, such as those of Snellen. If practicable, the field of vision should be determined so as to discover defects in the peripheral part of the retina. The inspection of the optic nerve by the ophthalmoscope should never be neglected. For an account of similar cases, Prof. Noyes would refer to Allbutt's recent work on the ophthalmoscope in brain disease.

Ozokerit in Skin Disease.—H. S. Purdon, M.D. (*Dublin Quarterly Journal of Med. Science*), recommends ozokerit, or vegetable wax, in the treatment of chronic affections of the skin, eczema of long standing, unaccompanied by much infiltration of the subcutaneous cellular tissue, tinea, scabies, and psoriasis. He states that it is as valuable as carbolic acid, oil of cade, or tar. Its action is regarded as that of a stimulant to the skin.

Treatment of a Dental Irregularity.—Prof. Norman W. Kingsley, N. Y. (*Dental Cosmos*, Feb.), illustrates, with four plates, the successful treatment of a case of dental irregularity, when the entire row of lower teeth shut outside the upper ones. The patient was a young lady of fourteen years of age. The external features showed: 1st. That the lower jaw was not too large, being neither too wide nor too long; and 2d. The upper alveolar border and row of teeth were contracted so much as to produce limited external deformity. The treatment consisted solely in the insertion of wedges between all the teeth, in conjunction with a retaining plate. The wedges, which were worn from the outset, being composed of elastic rubber, of such thickness only as would exert a gentle pressure. Six days after the first fixture was applied, the incisor teeth of the upper jaw were overlapping the lower incisors. Within twenty days from the time the power was first applied to the teeth, the entire upper row was articulating outside of the lower ones. A retaining-plate, which was worn for several months, was adapted to the upper jaw. The result is a most marked change in the profile. The individual features being naturally well formed and symmetrical, the change in their relations produced a face of more than usual beauty. There was no more discomfort to the patient while undergoing this process than is commonly experienced in the wedging apart of one or two teeth for the purpose of getting space for filling. There was no favoring diet, nor was there any provision made for mast cating while the teeth were in transit. The teeth in their new position and articulation have remained stationary for a period of three-quarters of a year.

Artesian Wells propagate Disease.—An instructive paper on this subject, by Dr. W. L. Lipscomb, Columbus, Miss. (*Geo. Med. Companion*), shows that where artesian wells abound, in Alabama, Mississippi, and other Southern States, there a new and virulent form of malarial disease, called Yellow-disease, or Hæmatural Intermittent Fever, and an aggravated form of algid congestive fever, abound; or, in other words, that they increase the prevalence and severity of malarial fevers, and that they are detrimental to the health of the places on which they are located. If heat, moisture, and vegetable decomposition are the active agents in the production of malaria, he believes that artesian wells are artificial manufactures of all those agents, being situated right in the houses of the residents, where, day and night, they can breathe, drink, and absorb the noxious exhalations.

THE MEDICAL RECORD:

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GRADUATION OF IMPROPER PERSONS.

Some time since we answered one of our London contemporaries in regard to the selling of diplomas by our college faculties. We then took occasion emphatically to deny even the grounds for a suspicion on the part of our English brethren as to any irregular practices whatsoever. When a letter appeared in the Medical Record charging one of the leading medical schools in this country with fraud, connected with the issuing of diplomas, we were not a little astonished; but, in justice to all, we determined either to have the charges refuted by a responsible, trustworthy, and impartial tribunal, or to condemn the college in question to a justly-earned infamy. Although no particular institution was named, the remarks were so generally affirmed by the writer of the letter to apply to the Medical Department of the University of New York, that the friends of the College set about at once, with the determination to thoroughly sift all the evidence in the case, not only for their own satisfaction, but for the satisfaction of the profession at large. A Committee of the Alumni Association was formed for that purpose, which Committee, on account of a disagreement as to the manner in which a report should be prepared, was replaced by another. The results of their investigations have developed some facts which are of interest to all the colleges throughout the country, especially as referring to the existing safeguards against the graduation of improper personages.

In order that the bearing of the facts brought out by the examination of witnesses and documents may be better appreciated, we will give a short history of the case in question:—

A druggist of this city some years ago—that is, in the early part of 1868, and before commencing the study of medicine—concluded to resort, as he freely admits, to a "little humbug," in order to raise some money. He accordingly made some pills, each of which he affirms contained two grains of aloes, but no other active ingredient. These pills were advertised in the daily papers in the following manner:—

"Dr. H.'s infallible pills for female obstructions. Twenty years' practical experience have encouraged me to introduce an article long needed. These pills will surely produce the desired effect, and need no further recommendation. For sale by druggists generally. For particular information, apply to the doctor's office, —— Avenue. Private office, No.—— street, from 7 to 9 P.M."

Finding that numbers of females, failing, as they naturally would, to obtain "relief" from these pills, called upon him for some more effectual remedy, and having as he says conscientious scruples against bringing on abortion, he became alarmed, and determined to stop the advertisements. This, it appears, he did. Shortly afterwards he resolved to become a better man, to renounce all his previous intentions at fraud and quackery, to study medicine in the legitimate way, and in due time to become a respectable practitioner. To this end he entered the Medical Department of the New York University, pursued his studies, and nothing was heard against his character until he presented himself for examination. Then, for the first time, the Faculty, as is authoritatively declared, heard anything derogatory to the character of this candidate. The charges then made were from three different sources. The first was from a practitioner of this city, claiming, in a letter to the Faculty, that the candidate not only advertised abortion pills, but that he had shown that writer some instruments which were used when the pills failed. The latter statement is denied by the candidate, and, as the writer thereof could not be found, that part of the evidence was in a legal sense worthless. Another charge was an anonymous one written in three different hands, and of a character of composition unworthy of notice. The last was more an objection than a distinct charge, and was made in conversation, in answer to a casual inquiry. The latter remarks, coming as they did from a very responsible source, were of such significance in the eyes of the Faculty, that the failure of the candidate to pass the required examination was regarded as a very fortunate circumstance.

This occurred in the early part of 1871, and the candidate signifying his intention of presenting himself for examination at the end of the succeeding year, he was informed that it must be conditional with his receiving the endorsement of some medical gentleman of standing as to his moral character, etc. These the candidate in question succeeded in obtaining, as shown in the report of the Committee of the Alumni Association (*vid.* p. 163), one of the strongest recommendations coming from the same gentleman who had previously objected to his graduation. The Faculty then took the responsibility, in view of all the circumstances of the case, of

giving a diploma after the second examination. These are the facts of the case as they refer to the charge of graduating a professed advertiser, made in the letter of Dr. Rogers (*vid.* p 70.)

The charge of graduating a professed perjurer, as also made in the letter of Dr. Rogers, is, in the language of the committee who have heard the testimony on both sides, simply founded upon the fact that "Stephen Rogers and the graduate in question testified to opposing statements in a suit instituted by Stephen Rogers against the graduate in question for the recovery of fees for medical services." The controversy was apparently of a personal character merely, and in a strictly legal sense the testimony of one could not be allowed more than that of the other.

The last and most serious charge, to the effect that the University "advocates the propriety and pursues the practice of selling their diplomas to persons living in different parts of the State, on the simple statement of persons seeking it, without any presentation of certificates or credentials," is positively declared by the Committee to be sustained by no facts whatever. But as Dr. Rogers has, in accordance with a promise made to the Committee, virtually retracted his assertion in regard to this point, which retraction has been published in the previous number of the RECORD (*vid.* page 117) it is unnecessary to examine into this part of the subject any further.

The case, as presented to us by the Committee of the Alumni Association, is a peculiar one, and, as we have remarked, carries with it a moral for every medical college in the country. All the charges are refuted, save that the graduate has been at one time an advertising quack. Under the circumstances, the Faculty have not much reason to be proud of their newly created alumnus. It is true that the Faculty were not aware of the character of the individual in question until the very eve of his examination, when it was too late to refuse him the ordinary privileges of the institution, and that before the second examination the requisite credentials were obtained; but the fact of his having advertised "female pills" stands in a very offensive and humiliating relief. The course which the college has taken in allowing the advertiser to graduate will be variously interpreted. In a legal point of view, the graduate has never been, according to any evidence that has been obtained, a criminal abortionist, neither does it appear that there has been any intent on his part to commit the crime of abortion; but when we allow this, what have we to say for the conscientiousness of any one who could stoop to obtaining money on false pretences? This latter aspect is the most charitable one in which the subject can be presented, and makes the offence on a par with the most shameful quackery. It argues for the offender the possession of a very slim moral obligation to the community at large; a moral obliquity which is a treacherous safeguard against the proper performance of those duties which are so inseparably connected with a high-minded and honorable profession. We admit that every one has a right to be forgiven, that every sinner has offered to him the opportunity after forgiveness of sinning no more, that it is in accordance with the true Christian spirit to allow this to be done; but when such a sin is the result of an acknowledged defect in the moral constitution of the sinner, the cases of radical reform are not of such frequent occurrence as to tempt earthly tribunals to run any special risks. We are not among those who believe such reforms to be impossible; we only express our convictions that they are exceptional. But, after all, this is so strictly a question which must be viewed by each one in accordance with his own moral convictions, that we leave it where it is, hoping that the future conduct of the graduate in question may vindicate a course which has been taken with the best of intentions on his behalf by the College and by the responsible gentlemen who have aided the measure by their endorsements.

The College in question has for so long a period enjoyed such an enviable reputation, and the chairs of its Faculty have been so long and so ably filled by gentlemen enjoying unquestioned reputations for probity, that no one can question their motives in this case; and if their expectations in regard to the accused are not realized, the most that can be said of their action is, that it was a mistake. We fail to see how, under the circumstances, the College could refuse an examination; and we are at a loss to know how, as a Faculty, they could ignore the certificates of good character presented by the accused. In a technical point of view, all the objections were answered; and as regards the matter of advertising, they had the right to use their discretion and to take the responsibility of running a risk of its repetition. They were in a dilemma, and this was to them the best way to escape from it under the peculiar circumstances of the present case; but whether their course was far-seeing, the future actions of the graduate must alone determine.

When we allow that it is a very difficult thing to remedy any case when it has progressed as far as the present one, we naturally become interested in the means which can be adopted to prevent the recurrence of similar ones. And here the moral of the story applies: Colleges cannot be too careful concerning the moral character of their matriculants. There is so little attention paid to this matter, that the furnishing of a trustworthy certificate of good moral character is looked upon in no more serious light than a pleasant little joke. We are sorry to say that colleges are more eager to strain a point as to whom they *can* admit, than as to whom they *cannot* admit. This is not peculiar to any school, but is a practice common to almost all. The University has exercised the *usual* care, and one of the results is seen when it is apparently too late to remedy it. If this be so with one of our leading schools, what must it be with those who are not so jealous of their good name?

The apparent neglect of a little precaution in allowing a matriculant whose character was not "above suspicion," to enter the school, has thrown upon its Faculty a responsibility, which, considering the abhorrence of the profession to advertising quacks, is a very weighty one. Let the easy prevention of similar cases in future commend itself not only to the college in question, but to every other similar institution throughout the land.

It must be conceded that with every precaution in regard to moral qualifications for matriculation, the best intentioned Faculty may be liable to err. To guard against this, we would suggest the practicability of publishing yearly the list of matriculants of each of the colleges, as soon as such list is completed, say during the first part of January. If this were done, every opportunity would be offered to any one interested to prefer charges against a matriculant before it would be too late, and the Faculty would not be held responsible for any mistake in admitting any one who, so far as they knew, was morally qualified to become a member of the profession of medicine.

THE PROPOSED LAW AGAINST QUACKERY.

The proposed act drawn up by the N. Y. Medico-Legal Society, to regulate the practice of medicine in the State, was published in extenso in a previous number of the Record, and has been before the Legislature. It will be recollected that the bill proposes to create a board of censors, who shall be elected from each county or district society in the State, and who shall have the power to examine all those in their particular districts who claim a right to practise medicine, and who shall have the power of granting a license. This license shall of itself be considered a legal qualification. Although we have not much faith in legal enactments as a means of either protecting the rights of the profession, or of guarding the interests of the public, we believe this bill has many commendable features. It cannot be claimed to be perfect, but there is enough of good in it to recommend it to the support of the profession of the State, and the countenance of the medical gentlemen of the Legislature. The intention is, as we understand it, not only to annihilate the diploma traffic, but to allow no one the title of physician in any manner, shape, or degree, who does not possess the requisite qualifications. All the advertising "doctors" can thus be reached, and, failing to pass an examination within a specified period, their business can be stopped by law. Any one possessing a diploma from a regularly organized medical college is to be practically exempt from any examination. We cannot see any provision for the moral character of the applicant, the presumption being that, if the required examination is passed, the board of censors have no right to refuse the license. At present there is, however, no recognized principle in law which would make it possible to compel any such candidate for examination to conform with any particular code of ethics. Practically speaking, however, the examinations, in cases of doubt as to criminal practices, could be of such a character as to give any evil-doer a very poor chance of obtaining a license. We can hardly imagine any quack capable of passing as rigid an examination as could be insisted upon by the censors. In an exceptional case, in which an ill-designing individual could pass, the officers of the law must alone be responsible for any subsequent criminal practices. As the profession is competent to make its own rules for the regulation of the conduct of its members, no legal enactment can compel it to recognize any unworthy associate. The bill provides that a successful candidate shall be eligible to membership of the different county societies, but the societies can elect them or not, as they deem proper or expedient. There does not appear to us to be any danger that the respectability of the profession will be damaged by any of the provisions of this proposed bill, and there is no doubt in our mind that it is capable of restraining, if not in the end of eradicating, the shameful practices of impostors. A commendable feature in the bill is, that it does not aim at too much. Its laudable object appeals to the common sense of every unprejudiced individual, and the experiment of such a law is worthy at least of a trial. We are pleased to see that the bill has, after much discussion, received the approval of the Health Committee of the Assembly, the chairman of which, Dr. Loughran, is not calculated to do anything that will damage the interests of the medical profession either directly or indirectly.

LOSTORFER'S SYPHILIS-CORPUSCLES.

In the present number will be found two very valuab e articles upon the Lostorfer Syphilis-Corpuscles, one by our esteemed friend Prof. Freeman J. Bumstead, the other by Dr. Edward B. Bronson. Both of these gentlemen are in Vienna, and are pursuing their investigations under such peculiarly advantageous circumstances that their statements are entitled to more than ordinary consideration. Many of the facts contained in these articles are entirely new, and will be presented for the first time to the profession on this side of the Atlantic through the medium of our columns. The article of Prof. Bumstead (p. 164), which contains the latest news from headquarters, was received just as we were going to press; but we deemed it of such importance that, at the risk of delaying the appearance of the number, we determined to find room for it. This circumstance will explain the reason why it has been inserted in its present place.

Small-Pox in the Alleghany Valley.—Dr. A. D. Binkerd, of Parker's Landing, Pa. (*Med. and Surg. Reporter*), writes that this disease has been unusually fatal during the past winter. In some localities more than fifty per cent. of the cases resulted fatally. In one neighborhood deaths were reported without a single case of recovery.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 13, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

DR. RODGERS, on behalf of the Committee on Microscopy, reported the specimen presented by Dr. Post to be one of local folliculitis.

INCRUSTED BLOTTING-PAPER RESEMBLING NECROSIS OF INFERIOR TURBINATED BONE.

DR. KNAPP exhibited a specimen of blotting-paper removed by operation from the nose of a boy aged 12. The patient had suffered from an offensive discharge from the left nostril for many months. On examination, what appeared to be a necrosis of the inferior turbinated bone was discovered. The probe grated against its surface, which was entirely bare, and of a stony hardness. The body was extracted by means of an ordinary forceps, and instead of being the lower portion of the inferior turbinated bone, it proved to be nothing but a cast of it, the mucous membrane of the bone being intact, but covered with ulcerations which were filled with pus. The basis of this incrustation was, on microscopical examination, found to be blotting-paper, which at some previous time had been introduced into the nostril. The specimen was of interest only in connection with its clinical history.

GANGRENE OF FOOT—THROMBOSIS OF TIBIAL ARTERY—THE COMPARATIVE UTILITY OF SYME'S AMPUTATION.

DR. HEWIT presented a specimen of gangrene of the foot removed by amputation from a young man, aged 32, who had entered the Charity Hospital six weeks ago, suffering from warty vegetations of the glans penis. The operation for phimosis was, after a time, performed, and the warts were removed. He left the hospital the same day and walked a great deal while in the city. The result was, that a good deal of inflammation was set up, and he was forced to re-enter the hospital within the succeeding twenty-four hours. This inflammation was followed by extreme fever characteristic of pyæmia, and the prostration was so great as to threaten immediate death. The administration of very large doses of quinine was attended with a temporary good effect. Coincident with this improvement was a cessation of pulsation in the anterior and posterior tibial arteries of right side. Shortly succeeding this, gangrene of the toes developed itself, and a distinct line of demarcation was formed at the metatarso-phalangeal articulation. In view of this fact, that the posterior tibial arteries did not beat, and that a large portion of the skin had been discolored, and that there was a good deal of tenderness and puffiness about the ankle-joint, it was considered prudent, on consultation, to perform Syme's operation. The latter was accordingly done by Dr. Fortun, resident surgeon. The case subsequently did well. The diagnosis was thrombosis of the posterior tibial. The patient had frozen the foot five or six years ago, a circumstance which lowered very materially the vitality of the parts, and tended to invite in the present condition of the patient a low grade of inflammation in the surrounding points. In making a choice between Chopart's, Lisfranc's, and Syme's operations, Dr. Hewit was always in favor of the latter under the peculiar circumstances which obtained in the present case.

DR. MASON stated that the experience of the surgical staff of Charity Hospital favored the performance of Syme's amputation in preference to either Chopart's or Lisfranc's. Not unfrequently patients upon whom the latter operations had been performed were compelled to return, to have Syme's amputation made.

OSTEO-MYELITIS.

DR. BRIDDON exhibited a specimen of osteo-myelitis, and gave the following history:

I visited Miss M. on the 9th day of July, 1871, and obtained the following history:—She is 19 years old, of good stock, at least I can elicit no clue to hereditary diathesis or predisposition to disease. She always enjoyed good health until the 5th January, 1869. On the 2d day of that month she was out visiting, but was warmly and comfortably clad, and does not think she took cold; two days afterwards she was attacked with pain in right ankle; it soon diffused itself over the whole limb, and became excruciating in character. The pain, though diffuse, had its foci of greatest intensity over the lower end of the femur and in the neighborhood of the tibio-tarsal articulation; it was accompanied by great swelling, which extended as high as the groin. On the 13th of the month an incision was made by the medical attendant on the inner aspect of the thigh, which, however, gave exit to nothing but blood. On the 20th, an opening formed spontaneously on the outside of the thigh, from which there was a copious discharge of pus. The pain now diminished, and there was a period of comparative repose, which, however, was of short duration. From the description I think there must have been diffuse suppuration of the limb, as it is stated that a number of openings formed in both leg and thigh, that they continued discharging for a long time, and that subsequently exfoliations of bone were discharged, a large slough formed over the heel, exposing the os calcis, which remained rough and bare for a time, but eventually cicatrized.

At the time of my visit the limb presented the following appearance:—The foot was in the condition of varus, firmly anchylosed. At the tibio-tarsal articulation there was an indented cicatrix over the heel; the lower half of the integuments of the leg were hard, brawny, and matted to the parts beneath, and, at some points adherent to the bone, crimson, glistening and scaly, were stretched over the convexities, resulting from incurvation of the foot, at other points of a brownish hue, and in the middle of the peroneal region was a large ulcer.

Motions of the knee-joint were free; lower fourth of the femur was slightly expanded; four inches above the internal condyle was a sinus leading to necrosed bone; on the outer side of the thigh, and in the popliteal space were the openings of other sinuses.

I supposed that I had to do with an ordinary case of necrosis. The leg was distorted, withered, and irrecoverably damaged; it was condemned at once; but before resorting to measures in that direction, I determined to make an effort to save the lower end of the femur. The sinuses in the popliteal space were opened up, and all the necrosed portions of bone were removed. A subsequent operation was made for another fragment. After these operations the sinuses were dressed from the bottom, and every attention was directed to improving the patient's general health. She responded to treatment, color returned to her pallid cheeks, but the sinuses refused to heal. In the month of November she had an attack of erysipelas, complicated with a large diffuse abscess on the outside of the thigh. This was opened four inches below the great trochanter, and after the active processes had subsided, a drainage

tube was passed from this through the sinuses in the popliteal space, and other tubes were passed transversely through the same region. These were kept in for a month, and irrigation was practised with carbolic acid in weak solution. The sinuses refused to close, and in the early part of March I convinced myself that a probe could be passed through a cloacous opening into the cancellous structure of the lower end of the femur. I advised amputation through the thigh, and my proposition was acceded to by the patient and her friends.

Operation was done the 12th of March, 1872. I selected the procedure by antero-posterior skin-flaps, circular through the muscles, planning so that the latter incision was made seven inches above the condyles, or at that point where the expansion of the bone terminated, so that when the muscles were retracted a section of the bone was made at least an inch and a half above the point. After division of the bone, the medullary substance was discovered to be in a very unpromising condition. It was semi-diffluent, almost dropping out of the canal, of a dark brick-red, mottled with a material of a grayish hue. I then stripped up the periosteum for an inch and a half, so as to leave a curtain of that membrane to fall over the end of the bone, as advised by Langenbeck, and made a second section. At this point the medulla was of normal consistence, but of a reddish color. The only remaining feature remarked during the operation was, that the femoral artery was certainly not larger than the adult radial. It was the only vessel really requiring a ligature. Another was used, but might have been dispensed with.

I present to the society a number of sequestra or superficial exfoliations of bone that were removed, some of them from the popliteal space, others from the leg.

The portion of the femur removed measures eight inches in length; it is moderately expanded above the condyles, the expansion tapering off and ceasing one inch below the transverse section; on the posterior aspect, immediately above the condyles, is a fistulous opening leading into the cancellous structure; a second opening may be seen one inch and a half above this, and three inches and a half above the tubercle of the internal condyle is a third opening leading into the medullary canal. On making a longitudinal section of the bone the saw passed for a distance of two inches between the condyles, as if it were passing through egg-shell; for a distance of about four inches above this the division was made with difficulty, the remainder with ease.

On examining the section it was observed that the two lower fistulous openings passed into the cancellous structure, in the centre of which was a small cavity continuous with the opening, which was filled with a semi-diffluent material, gravish, semi-transparent, resembling cold boiled starch. This cavity was not circumscribed or lined by membrane; it was continuous with the cancellated structure around; the alveoli, immediately adjacent, were filled with degenerate products of a bright lemon color, which contrasted vividly with the surrounding vascular zone.

Three inches above the condyles, the medullary canal was almost obliterated by thickening of the wall of the shaft. This expansion was fusiform, tapering off at either end. In the centre the walls were half an inch thick, sclerosed, and it could be seen that the increase was both eccentric and concentric; the third or superior fistulous opening led into this contracted portion of the canal; this was also filled with the grayish semi-transparent deposit. The remaining portion of the shaft was filled with medullary matter, in a caseous condition, of a bright lemon color; and at the point of transverse section the walls of the shaft were attenuated, not more than two lines thick.

In speaking of the morbid changes, Lancereaux says —There first occurs a disappearance of fat cells of medulla; secondly, a multiplication of the medullary cells, followed by suppuration of medullary substance terminating in necrosis; finally, suppuration of periosteum, and occasionally formation of an involucrum.

The chief interest in this case is the long continuance of the disease. Acute osteo-myelitis is well known to be a rapidly fatal disease, and I can find no record of chronic cases that have lasted so long. In this femur nature appears to have made an effort to arrest the upward progress of the disease, by filling the medullary canal with new osseous tissue; the bones of the lower extremity are evidently much changed, but the operation was only made yesterday, and I have only found time to examine the femur. I will make a careful examination of remaining bones, and report at the next meeting of the society.

The more acute disease, osteo-myelitis, is well shown in the admirable illustrations of diseases of the bones by Stanley, plate 7, fig. 1, and in pl. 56, fig. 6, Lancereaux's Anat. Path. These I exhibit to the members.

Dr. Peugnet remarked that in the majority of cases of osteo-myelitis the patient's limb as well as life might be saved by early and judicious treatment, and cited the case of a sergeant of the N. Y. Volunteers who received a gunshot wound at the battle of Cold Harbor, on the 4th of June, 1864.

The ball entered Scarpa's space, midway between its base and apex, on the inner margin of the sartorius, glanced on the outer aspect of the femur, and lodged in the muscles of the posterior femoral region.

On the 14th of June the ball was removed, at Alexandria, Va., at the original point of entrance, without any counter-opening having been made.

On the 30th of July, having come home on furlough, he was called in to see him, and found him suffering intensely, and recognizing symptoms of periostitis, and probably ostitis, he divided the periostium on the outer aspect of the thigh, three inches below the trochanter, and told him that this would afford him temporary relief, and that the surgeon in charge at David's Island would probably make an opening in the bone, on his return three days after; the wound was, however, allowed to heal.

On the 25th of May, 1865, having been transferred to Albany, the surgeon in charge made an incision at the same point at which he had originally made one, and trephined the femur.

On the 21st of April, 1866, having been discharged from the army a short time before, and again come under the doctor's care, he found him suffering with symptoms of pyæmia; the entire femur, from the trochanter down to and including the condyles, had become involved, the thigh was very much enlarged, and there was considerable tumefaction of the knee; two or three fistulous openings had formed on the anterior and external surfaces of the thigh, and the pain was at times intense.

The question of amputation, or a free incision from the trochanter downwards, separation of the periosteum, and the laying open of the entire medullary canal down to the cancellated tissue, suggested themselves; the latter operation was selected as giving the greatest chance. With the assistance of Drs. Stone, of West Farms, and Horsfield, of Fordham, the patient having been previously placed under the influence of chloroform, he made an incision on the external surface o the thigh, from the trochanter downwards, measuring ten and a half inches in length, then separated the periosteum on the anterior and posterior surfaces of the femur, which allowed the escape of a quantity of

pus; the femur was very much enlarged, and several cloacæ had formed; he then trephined it at four or five points, and with a chisel and mallet laid open the entire canal, from which a large quantity of offensive pus escaped; the patient's general health rapidly improved at first; the enlargement of the femur, about the condyles, and tumefaction of the knee rapidly subsided; but in the summer of 1867 he had two attacks of hæmoptysis, and an attack of dysentery, which reduced him considerably.

On the 1st of September, 1867, having consented to submit to an operation without taking an anæsthetic, with the assistance of Dr. Francis M. Purwy, of New York, then a student of medicine, he made an incision along the middle third of the thigh to a point below its junction with the lower third; but as the involucrum prevented the removal of the sequestrum, an opening was made between the lower and middle third of the thigh, as the sequestrum was too long to admit of its removal entire. The lower end was broken off and then removed. The long or upper end measured six inches, the lower two and a half inches. The patient fainted, but soon rallied. He made a rapid recovery; walked a mile on the 11th of December, and resumed his occupation as a carpenter, in January, 1868, and has been at work ever since.

Stated Meeting, March 27, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

OSTEO-MYELITIS.

DR. BRIDDON remarked: At the last meeting I presented eight inches of the lower end of the femur that had been removed on the previous day by amputation, the parts presenting the condition recognized as osteo-myelitis. It was regarded as of strumous origin, although in this patient there were no strumous antecedents. The upper two-thirds of the tibia presents the normal conformation, but the lower third is somewhat expanded. One inch above the tip of the internal malleolus was a fistulous opening communicating with the cancellous tissue. On section, the cells of the tibia were continuous with those of the astragalus, and there was no line of demarcation to show the existence of the original separation of the two bones; the anchylosis was therefore of the true bony character. This part of the tibia was not vascular. Its color was pale, and the medullary canal and cancellar tissue were filled with cheesy matter. The fibula was enlarged, its greatest circumference being three and a quarter inches. There were four fistulous openings leading into the cancellous tissue of this bone. On stripping off the periosteum, the bone was observed of a darker color than normal, being of a dull red mottled hue. The upper half of the bone presented the same appearance, on section. The osseous tissue is everywhere rarefied, especially in the upper half. In some portions of the cancellous tissue were found caseous matter, and in other parts the products of inflammation in a less degenerate stage. The bones of the tarsus were light and spongy, easily cut through with the knife, in fact it was that condition usually met with in the bony parts of scrofulous joints.

Dr. B. stated that fourteen days had elapsed since the amputation, and that the patient was setting up in a chair; the ligatures and sutures had all come away, and union by first intention had taken place in a considerable portion of the flaps.

SYMPATHETIC SUPPRESSION OF URINE THE RESULT OF INJURY TO URETHRA.

DR. OTIS exhibited a specimen of bladder and a portion of the appendages with the following history:—The House Surgeon of the Strangers' Hospital was called last Thursday, about noon, to see a man in the vicinity who was said to have retention of urine. He found a man, aged thirty, suffering from great pain, which he seemed to refer to his abdominal region, but the suffering was so intense that nothing more could be ascertained. His friend told the doctor that he (the patient) had been suffering from stricture for a long time, and that on the day previous he had had a good deal of difficulty in urinating, and that the morning following he had failed entirely to make his water. He went out for the purpose of endeavoring to do so, when this friend saw him introduce an instrument which, when, removed, was covered with blood. This was about all the history that could be gleaned by the House Surgeon; an hypodermic injection of Magendie's solution (7 drops) was administered, and I saw the case about four o'clock that afternoon. He was then in a state bordering on collapse, and had the general appearance of a man pretty well narcotized. He was exceeding restless, was throwing his arms about, his face was dusky, his pupils were contracted, his respiration from twenty-eight to thirty per minute, and at times markedly interrupted. On inquiry, it was stated that the patient had taken a Dover's powder given him that morning by another physician, which, however, was said to have been vomited.

On examining the abdomen, there was on percussion an almost complete flatness; at the same time the abdomen itself was markedly sunken. Fluctuation had been recognized by the house attendants, and by one or two gentlemen who were present. Dr. Briddon, who was also present, recognized those conditions. There was no other salient point in the patient's condition which I could observe. I was able to confirm the existence of a feeling like fluctuation, and, to my mind, there was no question about the fact that there was dulness over the entire abdominal surface. Introducing my finger into the rectum, and pressing over the pubes, nothing that would lead to the suspicion of the existence of a bladder could be found. The suspicion was, that there had been rupture of that organ. The fact that he was apparently narcotized I supposed to be due to the existence of a certain amount of uræmic poisoning. We endeavored to counteract the effect of the opiate by an injection of one-sixth of a grain of atropine every fifteen minutes, until the third dose was given. This, together with the administration of strong coffee and brandy every ten minutes, was all the treatment he had, with the exception of bastinadoing in order to keep him conscious. He could be aroused only with difficulty, and then could not give any answers to questions. He would say a sentence or two, and then relapse into a somnolent condition. After the third injection of the atropine, I noticed, sitting near his bedside, that the pupils, which were almost contracted to a pin's head, dilated so that they were three or four millimetres in diameter. On the occurrence of this dilatation the patient began to be convulsed, especially about the throat. He soon after passed into a comatose condition, and died about ten o'clock.

The post-mortem was made on the following day, and the specimen I have here shows the condition in which the genito-urinary apparatus was found. On opening the abdomen, there was discovered in the peritoneal cavity a yellowish fluid of urinaceous appearance, but not of a urinacious smell; the quantity found being

about six ounces. This, on examination, showed the presence of a certain amount of urea. The kidneys were examined, and were seen to be entirely normal both as to size and color, in fact not even engorged. The ureters were not at all enlarged, and there seemed to be nothing abnormal about them. The bladder was found to be thickened and ecchymosed, and there was found at the bulbo-membranous junction very distinct evidences of cicatricial deposit, culminating in a stricture of pretty considerable density. No stricture was found proceeding anteriorly until within a couple of inches from the meatus, where a dense mass of the same tissue formed another stricture which had been perforated just anterior to the closed point, and a false passage had been made, running down about four or five inches along the upper surface of the urethra. The only conclusion we could arrive at in this case was that the difficulty was one of a sympathetic character; that there had been a suppression of urine, and that this had been caused by the patient's efforts to get through his urethra—that the damage to the anterior portion of the urethra was the whole cause of the occurrence. The time from his uræmic symptoms until death was about twelve hours; from the occurrence of the damage done to death was about sixteen hours.

In the vicinity of this closed stricture were marks of previous false passages.

This man's hat contained two instruments which he had evidently used; one was a number three flexible bougie, and the other was a flexible English catheter, about the same size, with stiletie. With the latter the damage had been done. There was no evidence of any injury within the cavity of the abdomen to account for the condition in which it was found.

There is nothing more certain in my mind than the presence of dulness and fluctuation which went far to convince me that there had been rupture of the bladder, and yet the amount of fluid, as I have already stated, was not over six ounces. A collapsed condition of the intestines would seem to account for the sunken and flattened appearances of the abdominal walls.

Dr. E. Mason:—If there had been a rupture of the bladder, and that rupture had been situated posteriorly, I should suppose that an examination per rectum would have revealed the presence of fluid in the sac behind the prostate, and that the doctor says was not present. If there had been rupture anteriorly, it seems to me we should have had the evidences of a tumor in that locality.

Dr. Otis:—There was an entire absence of a tumor. His bladder was contracted down like the uterus of a primipara, and contained only three or four drachms of blood.

Dr. Mason stated, in answer to a question from Dr. Otis, that in 78 recorded cases by Dr. Stephen Smith, of rupture of the bladder, only four were caused by stricture. Of these one recovered.

Dr. Flint asked if the suppression of urine was frequent as the result of traumatic injuries to the genito-urinary tract.

Dr. Otis:—I have met with several instances of that kind. One reason why I ascribed the cause of death in this case to injury of the urethra, was on account of a case which occurred three or four years ago. A man upon whom I had operated for stricture by internal incision was doing very well until on the third day, when I attempted to pass a sound into his bladder. This was in the morning, and there was a good deal of difficulty in passing the instrument. I did not succeed in passing it entirely into the bladder, and not caring to persist on account of such difficulty, I desisted. I called to see him at eight o'clock in the evening when his breath was decidedly urinaceous; he had a dusky skin and was almost in collapse, and altogether seemed like a man in danger of speedy dissolution. He had not passed any water, and there was no water in his bladder. By the assiduous use of cups over the region of his kidneys, and of poultices, the secretion reappeared, and the man began rapidly to improve. Almost exactly the same condition of things occurred on two subsequent occasions in the same individual and from the same cause, and each time the chances were that the patient would die. There was albumen in his urine, but I never could detect the existence of casts. He was a broken-down man, and had been making his water by drops for several years, and it was full three weeks before I could get into his bladder with the finest filliform bougie.

Dr. Briddon related in that connection the case of a patient with a dense stricture who had come under his care last summer. In that instance he introduced into the bladder a bougie of larger calibre than usual. Three or four hours afterwards the patient had a distinct rigor followed by fever, the confusion of his intellectual faculties, and all the other phenomena usually seen in suppression. He had marked suppression for forty-eight hours. The symptoms were finally overcome by the use of dry cups to the lumbar region, elaterium, and the hot-air bath. The first urine voided contained a considerable amount of albumen, which continued to appear for a few days subsequently. He remarked that Sir Henry Thompson mentions several cases of death as the result of suppression caused by the introduction of bougies of larger calibre than the patient had been in the habit of using.

Dr. Jacobi remarked that usually in cases of retention of urine, the phenomena of uræmic poisoning could be explained by the damming up of the urine in the bladder in the first place, then in the uretus, then in the uriniferous tubes, the latter becoming so waterlogged, and the blood-vessels so compressed as actually to prevent the elimination of the urea and other excrementitious substances.

Dr. Otis reminded Dr. Jacobi, that in the case to which the specimen belonged, neither the bladder nor ureters contained any urine.

THE ANTIDOTAL PROPERTIES OF PREPARATIONS OF BELLADONNA.

Dr. Sands believed that in cases similar to the one presented by Dr. Otis, the occurrence of suppression was far too sudden to be accounted for by a waterlogged condition of the urinary apparatus. He thought that the nerves only could be invoked to explain the phenomena. The administration of the opium and the symptoms of the patient previous to death might lead to the suspicion that the hypodermic injections helped towards a fatal termination. The question of the tolerance of opium by different patients, however, was such an open question that no particular rule could be laid down. He referred, in passing, to a patient with suppression of urine to whom he was called in the absence of the attending physician. The latter arrived during the presence of Dr. Sands, and at once administered a quarter of a grain of morphine in some water. The man, far from suffering any ill effects, passed water freely at the end of four hours. Dr. S. did not believe that atropine deserved its reputation as an antidote for opium poisoning, and related in connection with the remark the case of an elderly lady to whom he was called in consultation. Her physician had previously administered by hypodermic injection fifteen minims of Magendie's Solution, in which was a small

quantity of atropine. In that case he was convinced that the atropine, instead of acting as an antidotal check to the morphine, really added to the effects those of another poison.

In regard to the question as to cases of rupture from retention, he referred to one occurring in Bellevue Hospital in which the bladder gave way while the patient was being etherized previous to the proposed operation of perineal section. He died four hours subsequently. The autopsy revealed a rupture on the posterior aspect of the organ, about 3½ inches in extent.

Dr. Mason stated that while he was House Surgeon in Bellevue Hospital it was customary after the operation for perineal section to retain the catheter in the bladder for a few days. He recollected the case of a colored man who, having worn the instrument for three days, it was removed for the purpose of being cleansed. Shortly after it was re-introduced the patient was seized with a chill, and all the other symptoms of urethral fever followed. At the autopsy which took place shortly after, the kidneys were found extensively diseased.

Dr. Otis related the case of a patient of his on board of one of the Pacific Company's ships which was of interest in connection with the effects of belladonna and its preparations on opium poisoning. This case occurred fifteen years ago when the antidotal properties of the belladonna were first advocated. The patient was a woman who was profoundly narcotized, breathing only four or five times a minute, and was in a very alarming condition. He began with drachm doses of tincture of belladonna every three hours. After the fifth dose the pupils began to dilate very slowly, and after continuing the administration until over an ounce of the remedy had been taken, the patient was out of danger and rapidly recovered. The success of that case had prompted him to employ the same treatment in quite a number of cases since, and he had seen no reason to change his original opinion.

THE USE OF OPIUM IN ACUTE URÆMIA AND CONVULSIONS.

Dr. Loomis, in connection with the use of opium in uræmia, stated that some three years ago his attention was first directed to its efficacy. He then for the first time used a hypodermic injection of morphine in a case of acute uræmia with convulsions, and the effect was to him astonishing. Since that time it has been his uniform practice in such cases, and thus far he was able to say that in every instance it had the effect of not only arresting the convulsions and subduing the coma, but of speedily restoring the urinary secretions and of causing profuse perspiration. So far as he was personally concerned he was convinced that opium was the best remedy we have for that class of cases.

In answer to a question from Dr. Jacobi, he stated that he had taken occasion to repeat the remedy at different times upon the same patient, and always with good result. The usual dose was ten drops by hypodermic injection, but he had gone as high as twenty drops of Magendie's solution. His first case was in consultation with Dr. Metcalfe. The patient had chronic Bright's disease with cardiac complication, and was exceedingly restless. Dr. M. directed him to administer a hypodermic injection of morphine, which he did, however, with "fear and trembling." The case, however, did splendidly, and the injection was repeated on the average twice in twenty-four hours for six or eight weeks, with the result of keeping the patient in a very comfortable condition. At the end of that time he died of the disease.

He also called to mind the case of a physician who, having acute Bright's disease, passed into a state of coma. In that instance ten drops of Magendie's solution were administered, and in four hours he passed quite a quantity of urine and went steadily and rapidly toward recovery.

Dr. Jacobi remarked that it was well known that certain kinds of irritation producing convulsions were not only temporarily, but not unfrequently permanently relieved by opium. To this class belonged the convulsions of uræmia, as well as those which occur in rachitical children, and children affected with craniotabes. He had no doubt that uræmic convulsions could be controlled by opium, but in regard to its effect upon coma he had no experience.

Dr. Loomis.—I take it for granted that urea is the irritant, whether coma or convulsions be present.

Dr. Flint remarked that some writers were directly opposed to the use of opium in cases of uræmic poison, affirming that it was especially dangerous as a poison. He had met with one case which militated against such views. The patient was a woman with chronic suppression, in which an ounce of McMunn's elix. was taken daily for many months, with no bad effect. She had never had convulsions or coma.

Dr. Peters alluded to the case of Bright's disease in which death was supposed to have been the result of a hypodermic injection of Magendie's solution.

Dr. Sands did not understand how to explain the deaths following the administration of opium in cases of Bright's kidney, except in the relation of a cause and effect. He referred to two or three such cases that had come under his observation, one in which an injection of five minims was sufficient to produce a fatal result.

In the cases mentioned by Dr. Loomis, where the irritation of uræmia was alone present, the opium doubtless had a good effect, but when administered to patients with chronic Bright's kidney, where neither of the symptoms were present, it was apt to be dangerous. In such cases it would appear as if uræmia was induced by opium.

Dr. Loomis remarked that the pupils of patients in uræmic convulsions, or uræmic coma, were in a large proportion of cases contracted. In making the statements concerning the use of opium in acute Bright's kidney, with coma, convulsions, or both, he was aware that it was at variance with the generally received opinions, but he nevertheless was convinced that it was not only harmless, but almost a specific.

Dr. Jacobi stated that the explanation of the bad effects of opium in chronic cases of Bright's disease was, in all probability, the impoverished state of the blood. Under such circumstances the patient cannot tolerate opium. The same thing has been noticed in cases of typhoid fever.

The Society then went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 25, 1872.

Dr. Abraham Jacobi, President, in the Chair.

The following physicians, recommended by the Comitia Minora, were elected to membership: James Clark Thomas, Colin Mackenzie, George M. Schweig, Henry Raphael, Francis Simnock, and Peter B. Wyckoff.

Dr. C. S. Bull, from the Committee on Intelligence, read a report on the Progress of Otology.

Dr. L. D. Bulkley, from the same committee, read a report on the Progress of Dermatology and Syphilography.

Dr. Goodwillie read the report of the Committee on Meteorology.

Dr. E. Peugnet read portions of the elaborate experimental paper on *Veratrum Album*, *Veratrum Viride*, *and their Alkaloids*, which we publish in full (page 121).

The exhaustive character of the paper gave little opportunity for discussion. Dr. Perey, to whose researches the writer had often referred, expressed his high admiration of the investigations reported, and would have remarked further upon a few points, had he not been suffering from extreme hoarseness. Dr. J. C. Peters exhibited drawings of the different species of veratrum, and spoke briefly of some therapeutic uses of veratria.

Nominations were made for delegates to the American Medical Association, and the President and Secretary were authorized to fill any remaining vacancies in the delegation.

Adjourned.

New Instruments.

INSTRUMENT FOR AMPUTATION OF SCROTUM.—FOLDING SAW.

By Z. EDWARDS LEWIS, M.D.,

WEST FARMS, N. Y.

The instruments illustrated below were made after my devices by Messrs. Tiemann & Co., in 1867, but have never before been published. I trust that they will be their own apology.

The clamp (Figs. I. and II.) is intended especially for use in amputation of the scrotum for cirsocele, where the want of a clamp with the right curve and with assured parallelism of the blades has long been felt. It

will, I think, prove useful in many other cases on account of its simplicity, and its possession of the three qualities—curve, parallelism, and power.

It consists of two semicircular bars (*a.a.* Fig. II.) with a radius of 1¾ inches, from each end of one of

which immovably fixed therein, and at right angles to the plane of the circle, arises a strong screw (*b*), two inches long, which passes through a suitable hole in the corresponding end of the other bar, and this end (*c.*) is accurately flattened on the sides in the plane of the circle. Upon this screw play two milled-headed nuts —one on either side of the movable bar—whose faces opposed to this bar are broad, flat, and parallel (a. e. Power is obtained by screwing down the upper nuts (*d*), while parallelism is secured after the clamp is thus tightened by forcing up the lower nut, as represented in Fig. II. The pressure prevents the tissues from slipping, but is made more certain by a diagonal milling of the applied edges.

Against the smooth concave surface the sutures may be passed, in readiness for tying as soon as the clamp is removed, and the equally smooth convex surface guides the knife and secures a clean section.

The saw (Figs. III. and IV.) was originally intended to replace the ordinary folding metacarpal saw in the complete pocket-case, but may be made of any length up to the full size for amputations. A glance at the annexed cuts will obviate the necessity of a lengthened description.

Fig. III.

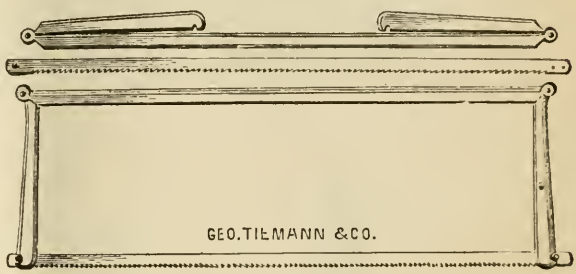


Fig. IV.

Fig. III. shows the instrument folded up and ready for the case, while in Fig. IV. it is prepared for use—the arms having been revolved around the axes until arrested by the contact of the shoulders, and the blade having been then inserted into the narrow slits in the hands and caught by the hooked fingers on the transverse pins fastened in the blade ends. This insertion of the blade can only be accomplished through the forcible approximation of the arms, which is permitted by the springing of the back, and is upon the principle of the stringing of a bow. The spring-back answers perfectly to keep the blade tense, and replaces satisfactorily all other devices for that purpose.

In using the saw, the want of an ordinary handle is at first felt (and one may be fitted by a very simple clamp), but a little practice removes the desire for any addition which would detract from the simplicity of the instrument, and in the pocket-case would take up valuable room. The arm at the heel of the saw is to be grasped firmly against the palm with three fingers, and the back steadied between the thumb and forefinger, while care is exercised not to bear on too heavily.

More advantages may, I think, be fairly claimed for this saw than for any other with which I am acquainted. It is simple, compact, and inexpensive; the support of the spring-back allows the use of a thin sharp-cutting blade, which diminishes the danger of necrosis following section, and allows all corners and edges to be sawn smoothly off—thus dispensing with the bone-forceps; and, finally, it is a satisfactory substitute for the chain-saw in a large majority of the cases in which that instrument is indicated. The mode in which the blade is held in the frame allows of its reversal, and it can saw upwards as well as downwards. To use it as a chain-saw, a thread attached to a proper needle is to be fastened to the loose blade through the hole *g* near its end, the blade then carried beneath the bone, and inserted into its frame with the teeth turned upwards, towards the back, and the section made precisely as in ordinary sawing, except that the pressure must be upwards instead of downwards.

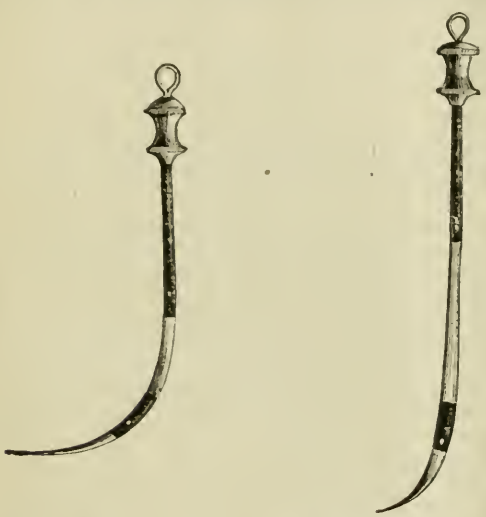
The saw can also be used with perfect satisfaction in autopsies, where it is sometimes a matter of the highest importance to know that fracture of the skull has not been produced—as is certainly sometimes done—by the coarse instruments generally used in separating the calvarium.

A NEW GALVANO-PUNCTURE NEEDLE.

By ALEX. MURRAY, M.D.

NEW YORK.

The accompanying wood engraving shows the several portions of the new insulated needle. Without entering into a minute verbal description, the dark shaded parts indicate the portions insulated; the lighter shades the free metallic surface, which are the part or parts specially intended to convey the current where desired for electrolytic purposes. The advantages of the improved arrangement of the insulation are:



1st. That the needles will retain whatever position they are placed in after having transfixed the morbid growth. The circular white spots on the insulated portions of the needle are intended to indicate the parts of the needle which are to remain in contact with the skin during the operation, so as to prevent ulceration or sloughing. 2d. That they present more metallic surface for the galvanic current. 3d. That time is saved and the hands of the operator left free. 4th. That they can be used in all cases, and in the same manner as the ordinary needle now in use, by simply coating the needle non-insulated part with oil or white wax.

The needles are straight and curved, and from 2 to 6 inches in length. These needles can be had from the Galvano-faradic Manufacturing Company, New York.

Duration of Life of Physicians.—The last issue of the Proceedings of the Massachusetts Medical Society gives a list of members who died in 1870 and 1871, thirty-seven in number. The ages of thirty-two are given, averaging sixty and a half years, the extremes being twenty-eight and eighty-four. This is a much longer tenure of life than common opinion allots to our profession.—*Pacific Medical and Surgical Journal.*

Obituary.

PROF. SAMUEL HENRY DICKSON, M.D., LL.D.,

PHILADELPHIA.

Professor Samuel Henry Dickson, M.D., LL.D., was born in Charleston, S. C., September 20, 1798, and died in Philadelphia, March 31, 1872. In 1811 he entered the Sophomore Class at Yale College, and graduated in 1814, at the early age of sixteen. He commenced the study of medicine during the same year, in the office of Dr. P. G. Prioleau, a distinguished physician of his native city, remaining with him for five years. He attended two courses of medical lectures at the University of Pennsylvania, from which he graduated in 1819. His practice began the July following his graduation, and soon became one of the most extensive and most lucrative in this country, and continued so until ill-health forced him to retire from its active duties.

In 1822 he read a course of lectures on physiology to a class of young men, and in 1824 took the chair of Professor of Institutes and Practice in the Medical College of South Carolina, of which he was one of the founders. This position he afterwards resigned, but soon, in conjunction with other medical gentlemen of distinction, established another College in Charleston, in which he occupied a similar chair. Here he remained until 1847, when he accepted an invitation from the University of New York to fill the same position in that institution. He always referred with pleasure to this portion of his life, as his reception by his colleagues, and his intercourse with them and with the profession generally, as well as the literary and social circles of New York City, was most cordial and agreeable. He remained in New York for three winters, when he was urgently invited to return to the position he had filled in the Charleston College, to accomplish which Dr. Bellinger, the Professor of Surgery, resigned his chair to Dr. Geddings, who had taken Dr. Dickson's professorship on the latter's removal to New York. When Prof. Dickson returned to Charleston, he was most warmly welcomed, a public dinner having been given him by his friends in the profession and out of it. He remained in Charleston until 1858, when he accepted an invitation to join the faculty of Jefferson Medical College of Philadelphia, the death of his special friend, Dr. J. K. Mitchell, having left the professorship of the practice of medicine vacant in that institution; and here he lectured until death called him from the duties he loved so well.

From early life Prof. Dickson had suffered ill-health; —from 1825 being ill with phthisis, attended with many hemorrhages from the lungs, and in 1857 being first attacked with the painful malady of which he eventually died. He had been invited to the medical colleges of Lexington, Ky., Augusta, Ga., Richmond, Va., and Nashville, Tenn. His contributions to medical journals have been absolutely enormous, and the habit of writing was continued almost to the last days of his life. His best known and largest work is his *Practice of Medicine*, first published in two volumes, and afterwards condensed into one. It was a masterly production, and at once commanded attention and respect. In the earlier editions of this work will be found many physiological and pathological opinions upon disease, which, at the present day, are considered progressive, but which his acumen detected a score of years in advance of the regular progress of medical science. His work on *Dengue*, his *Essays on Life, Sleep, Pain and Death*, and

his *Studies in Pathology and Therapeutics* have also been very widely read, and greatly appreciated; but besides these productions, there have been hosts of papers, not only on subjects purely medical, but upon almost every conceivable topic that could interest a reader and man of science—papers which it would be impossible to enumerate in the limited space at our disposal.

Prof. Dickson was one of the most scientific and well-read men that our profession could boast of. His familiarity with the classics, with the elegant literature of the past century, and the new topics of his own time was wonderful. He was a lover of the historian and of the muse, and often brought their records and their rhyme to bear upon the illustration of the subjects of his lectures, or topics of conversation. He loved the good writers of fiction also; and Dickens and others were occasionally mentioned in his lecture-room as having depicted some of the objective symptoms of certain lingering diseases more minutely and picturesquely than some of the masters of medical literature.

Prof. Dickson, at least during the later years of his life, did not resort to diagrams, models, or specimens in his lectures; but he strongly encouraged post-mortem investigations, and bed-side observation. His style of lecturing was somewhat peculiar. He spoke extemporaneously, without note or paper, but occasionally he would read an extract from a book that had engaged his attention while preparing for the lecture. He entered the lecture-room dressed as he came from the street, hat in hand; and, bowing to his class as he placed this on the desk and deposited his gloves, commenced in a colloquial way, which seemed to say of itself—as well as manners can speak—"*I was passing by, gentlemen, and thought I would drop in and talk to you this morning about—so and so.*"

Prof. Dickson always grasped his subject with the mind of a master; and his manner, though not at all rhetorical, was eloquent and earnest, especially when alluding to the subject of preventible diseases, and the proper methods for banishing them from communities. In the narration of the course of special affections he was particularly happy, his extensive experience affording ample materials for elucidation; and the shade that would pass over his expressive countenance at the memory of some departed patient whose case was in his mind, showed that the sufferer, though long gone, had not been forgotten. Prof. Dickson never gave an ideal account of a disease, nor seemed to select any case in particular as an exponent. He would give the general characters of disease, and then trace out their resemblances and their differences. He was careful to give due credit to other authorities, and gave ample reasons when he felt compelled to differ from them.

His lectures were always attended by a number of graduates of several years' standing, in many instances men of active practice, who would snatch many an hour from their daily duties to listen to the master, and to learn from his lips the story of disease. Indeed, towards the latter years of his life it was thought that Prof. Dickson adapted his discourse rather too much to the understandings of the maturer portion of his audience, and thus occasionally taxed the comprehension of the under-graduates too severely.

Prof. Dickson was very much beloved by his friends, his patients, and his students. His manner was dignified, but highly courteous, and the respect and attention that his innate politeness accorded to the opinions and requests of the young men who called upon him for academic or professional advice, sometimes rendered their intercourse somewhat embarrassing on their part. Coming to a teacher or a counsellor, they found a friend and well-wisher, and could hardly realize the fraternal feeling that was made evident without effort or design, the natural offspring of his innate courtesy.

We regret that the requirements of our columns will not admit of a lengthened and detailed notice of the subject of this memoir. His merits are a sweet source of memory to his bereaved relatives, with the grief of whom many warm hearts are at present in close sympathy.

Correspondence.

GRADUATION OF IMPROPER PERSONS.

To the Editor of the Medical Record.

Dear Sir:—At a special meeting of The Alumni Association of the Medical Department of the University of the City of New York, held April 16, 1872, the following statements were adopted and ordered to be printed:—

The Alumni of the Medical Department of the University of the City of New York, resident in New York, have learned from no less authority than the author himself, that their *Alma Mater* was the college meant in an article entitled "A Fatuous Profession and Infamous Medical College," and signed by Stephen Rogers, of New York City.

Inasmuch as the charges therein contained have had a wide circulation given them by their originator, in public and private utterance, the Alumni have felt it incumbent upon them to give them a full investigation, which has been done at the hands of two committees: the first being Drs. Frederick D. Lente, James R. Leaming, and James H. Anderson; the second, Drs. James R. Leaming, James H. Anderson, James L. Brown, and Thomas C. Finnell.

After hearing the reports of these committees, and after a full discussion of the questions involved, at two large meetings of the Alumni resident in New York and suburbs, they beg to state to their brethren in the profession what they believe to be the facts in regard to the three charges made against the college by Stephen Rogers.

I. The evidence to sustain the charge that a perjurer was graduated at the college, is contained in the fact that Stephen Rogers and the graduate in question testified to opposing statements in a suit instituted by Stephen Rogers against the graduate in question, for the recovery of fees for medical services.

II. The evidence to sustain the charge that the college had graduated an abortionist is found in the admitted fact, that the graduate in question, before his matriculation at the University, a fact unknown to the faculty until he came up for graduation, did advertise pills to remove female obstructions in the terms made known by Stephen Rogers. It does not appear that since that time the graduate in question has been engaged in any immoral practices. It does appear that he has exhibited repentance for this action, and that he presented letters of recommendation from Dr. Abram Jacobi, Professor in the College of Physicians and Surgeons, who had been his chief accuser, and on account of whose statements the candidate had been held in abeyance for a year, withdrawing his charges and stating expressly that "I know of no facts in Mr.——'s life or traits in his character that would induce me, if I were a member of your faculty, to withhold his diploma from him;" from Drs. John L. Campbell and Chas. Brueninghausen, besides one as to his correct business habits from Dr. Wiener, which letters seem to have

persuaded the faculty of the intention of the graduate to lead a correct life.

III. The Alumni find that the charge of selling diplomas is sustained by no facts whatever; and that Stephen Rogers, at a meeting of the first-named committee, agreed to publicly retract it.

JAMES R. LEAMING, *President.*
CHAS. INSLEE PARDEE, *Secretary.*

LOSTORFER'S SYPHILIS-CORPUSCLE.

LETTER FROM

PROF. FREEMAN J. BUMSTEAD, M.D.

VIENNA, April 5, 1872.

TO THE EDITOR OF THE MEDICAL RECORD.:

MY DEAR DOCTOR,—Before this reaches you I presume you will have received and published a letter from my friend Dr. Bronson, with regard to the so-called "syphilitic corpuscles," which Dr. Lostorfer claims to have discovered in syphilitic blood, and which, as he asserts, are an unfailing sign of syphilitic infection.

With this letter already before your readers, it is unnecessary for me to describe the method of examination adopted by Dr. Lostorfer, nor to speak of the excitement which ensued upon the announcement of the discovery in the *K. K. Gesellschaft in Wien*, nor of the violent and personal character of the discussion which has since followed among the disputants *pro* and *con.*; but I hear that the subject has excited quite as much, if not more, interest in America than here, and your readers may like to know the further progress of the matter in Vienna.

Dr. Lostorfer's investigations were commenced in Prof. Stricker's laboratory, and Prof. S., after subjecting Dr. L. to the successful test of an examination of a number of specimens from syphilitic and non-syphilitic persons, gave his permission to Dr. L. for the publication of the latter's paper. In the discussion which ensued, the chief opponent of Dr. L.'s views was Prof. Wedl, who asserted that the "corpuscles" were only fat, or particles of protoplasma, which had accidentally gained entrance into the blood at the time it was drawn. Prof. Wedl also severely criticised Dr. Lostorfer's method of examination, and was himself as severely criticised by Prof. Stricker in return.

Profs. Gruber and Neumann took sides with Prof. Wedl; while Prof. Hebra, and especially Prof. Stricker, have stood up for Dr. Lostorfer to this extent, that he was successful in recognizing syphilitic from non-syphilitic blood in a certain number of tests to which he was subjected; and Prof. Stricker was induced, if not compelled, both by the scientific interest of the subject itself and by the personal manner in which he had been attacked, to follow out a series of investigations for himself.

Prof. S. kindly invited me to witness what he was doing, telling me at the same time that his object was not so much to settle the question of the dependence of the corpuscles exclusively upon syphilitic infection, as to ascertaining the best method for their examination, and the manner of their growth, so that others might be better prepared to carry on the investigation as to their origin; and I propose chiefly to relate what he has thus far accomplished.

The first time I visited Prof. S.'s laboratory I found the temperature of the room raised to an uncomfortable degree of heat, and was told that this was done expressly in order to hasten the appearance and favor the growth of "the corpuscles." A few days before, the fire had been allowed to go out, and the corpuscles were very slow in making their appearance, and in their subsequent development.

Prof. S. has since accomplished the same object by using the warming apparatus [*heitzbarer Objectträger*] invented by him, and described in the introduction to his *Handbuch der microscopischen Anatomie*, p. 14, or again by setting the moist chamber, in which the specimens are kept when not undergoing examination, in the sun, which at this season of the year is not too warm. Of course the former mode is employed when it is desired to keep the same specimen under the microscope for any length of time, and watch it every few minutes; and the mercury in the thermometer attached to the apparatus should indicate twenty-nine degrees of Celsius, when the temperature of the glass slide is supposed to be about twenty-four or twenty-five. A greater degree of heat is injurious; for example, yesterday the mercury was allowed to rise to thirty-five degrees of Celsius, when the corpuscles entirely disappeared.

In order to keep the air moist around the specimen, and prevent the evaporation of the fluid contents, four folded pieces of bibulous paper are thoroughly wet and laid one on each of the four sides of the object glass. Care must be taken that the water does not flow over the glass to the specimen, and, on the other hand, the wads must be moistened as fast as they become dry.

At the time of collecting the specimen of blood, it is desirable to lay two exceedingly fine shreds of silk across it (parallel). These serve a double purpose; that of collecting a portion of the plasma of the blood, and that of serving as landmarks by which the position of any single corpuscle or set of corpuscles can be fixed in the memory, or by the aid of a drawing, from one examination to another. The ends of the slide should also be marked right hand and left.

Prof. Stricker has found one difficulty attending the preservation of the slides in the moist chamber, viz.: the vapor collects to some extent upon the glass, and a small, but still an appreciable, amount of water gains entrance beneath the covering glass, and this, as I shall presently mention, has an injurious effect upon the corpuscles when young, causing them, if the amount of fluid be sufficient, to shrink. Thus far, however, the moist chamber cannot be dispensed with. Prof. Stricker is trying to find some way to obviate the difficulty, and meanwhile recommends that the slides, after being charged with blood, should be exposed to the air long enough to allow a narrow rim of the specimen to dry, before they are placed in the chamber.

With regard to the magnifying power requisite for the examination, I presume Dr. Bronson's paper informed you. Prof. S. uses, as Dr. Lostorfer did, Hartnack's immersion lens No. 10, and occulaire No. 3.

The corpuscles first make their appearance towards the periphery of the specimen, or in the neighborhood of an air-bubble, in other words, towards the part nearest the external air. This would show either that their germs are derived from the air, or, more probably, that the air is more favorable to their development.

The first morning that I witnessed Prof. Stricker's examinations, some blood was under the microscope, which had been drawn only twenty minutes before. Blood from the same patient had previously been tested and found to be unusually rich in corpuscles. At my entrance Prof. S. told me he thought he could see the commencement of corpuscles, but was not

certain. I looked in and, on moving the fine adjustment, could see a number of exceedingly minute points, of a dark color, scattered over the field. While I was watching them, one of these points gradually increased in size, and assumed the light-breaking appearance of a corpuscle, with which I was already familiar. In the course of half an hour, five or six were to be seen, and after the lapse of another hour there were twenty to thirty in the field, and several of them had attained four or five times the diameter they had at first. I must repeat, however, that this degree of rapidity in the time of appearing and in growth is extremely rare, and, as Prof. S. remarked, may not be met with again for a long period. To one who has carefully studied these bodies it makes but little difference whether their growth takes place in a few days or in a few hours; but such a case as this affords an admirable opportunity for demonstrating the fact to others.

With regard to the sprouting of the corpuscles described by Dr. Lostorfer, Professor S. has observed nothing more than what appeared to be a ripple-like projection on the side of one of the larger corpuscles [this too, if I am not mistaken, is all that Dr. Bronson ever observed], and he is not certain that this is a sprout, because he has repeatedly seen a small corpuscle come in contact with a larger one, and subsequently in appearance coalesce with it.

The addition of water or of acetic acid causes the younger corpuscles to shrink and shrivel up, but has little or no effect upon the older ones.

Iodine also causes them to shrivel, but does not change their color to blue.

Osmic acid does not turn them black, and hence they cannot be fat, as Prof. Wedl asserts.

Prof. Stricker is not prepared to state positively what the nature of these bodies is, but he regards them as, probably, organisms, and judging from the action of reagents upon them, not of a vegetable character.

Prof. Stricker has examined the blood from many cases of healthy persons, from five cases of lupus, from five cases of variola, from three cases of typhus, and from one case of typhus abdominalis, and in none of these was he able to discover the bodies in question, except in one case of lupus, in which they existed to perfection; but here the question comes in, whether lupus is a form of syphilis or not.

The number of syphilitic persons whose blood he has thus far examined is twelve; in nine he found these bodies and in three he did not; but he is not sure that their apparent absence in the latter was not due to defective examination.

I have also had several opportunities of conversing with Dr. Lostorfer. He has told me, what I had heard from several other sources, that he had been making a special study of the blood a long time before he hit upon his supposed discovery. The first time that he happened to examine the blood of a syphilitic person he recognized these bodies as something which he had never seen before. Regarding them as doubtless due to syphilitic infection, he has now abandoned the study of healthy blood.

I asked him if there was nothing in healthy blood which could be mistaken for them. He replied, "Yes, to an inexperienced observer," and that even the most experienced observer, if allowed only a single examination, might, in some instances, be in doubt, but that this doubt would be removed by repeated inspections of the specimen.

The most liable sources of error are the following: Sometimes a nucleus of a colorles scorpuscle of healthy blood will resemble a syphilitic corpuscle. Usually a fine outline, at least, of its cell-wall may be seen and will show what it is. But even if it be separated from its cell and stand alone, it does not so sharply break the light as a syphilitic corpuscle, and its outline is broader and darker.

Fragments of torn red corpuscles may also give rise to deception, but they show no tendency to increase of size, and soon disappear.

In this statement, I presume Dr. Lostorfer took it for granted that no one would mistake an undeveloped red corpuscle for one of these bodies; for this error certainly might occur to a novice. I would also add that both Dr. L. and Prof. Stricker evidently attach much importance to a prolonged or repeated examination of the same specimen, by which the conduct, whether progressive or retrograde, of suspected bodies can be ascertained.

I am not aware that the opponents of Dr. Lostorfer are carrying on any serious investigations to demonstrate their fallacy, if such exist. They appear to be satisfied with the assertion that his corpuscles can be found in any blood, and that they are fat or protoplasma, or something else, but not an evidence of syphilis. The controversy has unfortunately assumed a personal character, and I hear the words, "unloyal," "swindel," "ass," and (without fear of wounding an American's feelings), "Barnum-humbug," oftener than is either dignified or gentlemanly. I have no idea that the question is to be settled in a hurry; and, perhaps, I shall have a chance to write you of its further progress during my stay here.

I cannot close without a few words in justice to Prof. Salisbury, of Cleveland, Ohio, who published his paper on the "crypta syphilitica," and "crypta gonorrhoica," in 1868, a copy of which, I am sorry to say, I have not been able to find in Vienna for reference.

Within a short time of its publication, Prof. Salisbury was so kind as to send me some blood which he said contained the syphilitic crypta upon a slide; and my impression is that the bodies were very similar to those that I now see in Vienna, but I cannot be positive, after so long a time, that they had the same essential characters.

With the aid of the able microscopist, Dr. Ed. Curtis, I examined the blood from a number of syphilitic patients in my wards at Blackwell's Island, and we found the same bodies as in the specimen sent by Prof. Salisbury, but we also found what appeared to be the same in the blood of several healthy persons.

Now the bodies that Dr. Curtis and myself saw were to be seen in the blood immediately after it was drawn from the body; and, if I am not mistaken, Prof. Salisbury insisted that they should be sought for at this time; whereas the corpuscles of Dr. Lostorfer are rarely to be seen (except in some extraordinary instance as the one I have mentioned, or except when hastened by heat), until after the lapse of at least twenty-four hours.

For this and other reasons I do not feel at all sure that Prof. Salisbury's "crypta" and Dr. Lostorfer's corpuscles are one and the same thing; but should this prove to be the case, the honor of priority in the discovery will undoubtedly belong to Prof. Salisbury, and no American will more heartily rejoice at it than

Yours very truly,

F. J. Bumstead.

New York Academy of Medicine.—Drs. John W. Robie and Rudolph Tauszky were elected Resident Fellows of the New York Academy of Medicine.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 5, 1872, to April 18, 1872, inclusive.

MILLS, MADISON, Surgeon.—By S. O. 86, War Department, A. G. O., April 11, 1872, granted sixty days' extension of leave of absence.

BAILY, J. C., Surgeon.—By S. O. 48, c. s., Department of California, relieved from duty at the Presidio of San Francisco, and to await further orders there.

MCMILLIN, THOS., Assistant Surgeon.—By S. O. 48, Department of California, April 2, 1872, assigned to duty at the Presidio of San Francisco, Cal.

BREWER, J. W., Assistant Surgeon.—By S. O. 53, Department of the Missouri, April 3, 1872, assigned to duty at Fort Harker, Kansas.

MIDDLETON, P., Assistant Surgeon.—By S. O. 74, Department of the South, April 9, 1872, granted leave of absence for 30 days.

Medical Items and News.

THE SMALL-POX EPIDEMIC IN PHILADELPHIA.—Dr. William M. Welch, in charge of the Municipal Hospital, has submitted his report for the year 1871 to the Board of Health. It appears that there were 1,227 cases of small-pox treated at that institution during the year. The highest number under treatment at any one time was 312, being 122 more than the ordinary capacity of the building. In order to meet this demand two of the large corridors were enclosed and hospital tents provided, which, with board floors and coal stoves, were made comfortable in the coldest weather.

During the past year 1,227 patients with variolous disease, and 22 with other diseases, three being cases of relapsing fever, were admitted. The admissions of the variolous patients were as follows:—

January	5	July	2
February	2	August	13
March	3	September	25
April	6	October	228
May	5	November	437
June	3	December	498

The following is a table of the various diseases, divided into variola and varioloid, showing the admissions each, the number of deaths, and the rate of mortality:—

	Admitted.	Died.	Percentage of deaths.
Variola	677	353	52·14
Varioloid	550	8	1·45
Totals	1,227	361	29·42

In making a differential diagnosis between the two varieties of the disease, Dr. Welch paid no regard as to whether his patients had or had not been vaccinated, except to classify all unvaccinated cases, no matter how mild, as variola. He classified all cases as varioloid where the patients had been vaccinated. In all the deaths from varioloid (or vaccinated cases) there has been either some constitutional peculiarity or some intercurrent disease that has been auxiliary in terminating life. The rate of mortality in the hospital was "extraordinarily high." The rate of mortality in the city, 23·15 per cent. (there being 8,114 cases of small-pox and 1879 deaths), proves conclusively that the epidemic was one of an extraordinary malignant type.

Of the 1,227 variolous patients 1,041 were white, and 186 black. The percentage of deaths among the former was 28·53, and among the latter 34·4. The increased mortality among the blacks may be accounted for from the fact that the blacks are not only more susceptible to the disease, but that a larger portion of them have been admitted to the hospital unvaccinated. Of the 1,227 variolous cases, too, 817 were males and 410 females, the percentage of death among the former being 28·57, and among the latter 31·51—a difference for which the physician has no explanation.

The following table shows the admissions of variolous subjects between the ages there designated, together with the number of deaths and the rates of mortality:—

Ages.	Admitted.	Died.*	Per cent. of Deaths.
Under 1 year	12	10	83·33
1 to 15 years	162	60	37·00
15 to 25 years	599	185	30·88
25 to 45 years	383	108	28·19
45 years and upwards	71	24	33·8
Totals	1,227	387	31·54

Dr. Welch deduces these conclusions from his notes of the mortality among infants:—That variola in unvaccinated infants is almost uniformly fatal, and that vaccination performed in less than seven days prior to the appearance of the eruption will not modify the disease; but when performed as long as seven or eight days prior, it may so far modify the disease, as to render it harmless. These facts he has verified. As to the next period of life, from one to fifteen, the physician in charge has not had time to divide the admissions into vaccinated and unvaccinated, and promises the information at some other time.

The third period of life, from fifteen to twenty-five years, while it is the shortest period noted in the table, except that of infancy, gives by far the largest number of admissions, showing the increased susceptibility on the part of those vaccinated in infancy to the disease after the age of fifteen, and especially during adolescence. There is nothing in the death-rate, comparatively speaking, that is remarkable. The period of life from twenty-five to forty-five shows the lowest rate of mortality; while from forty-five years upward, the death-rate is again increased.

The following table will show the number of variolous subjects admitted unvaccinated, the number of deaths, and the death rates; also, the number that had been vaccinated in infancy, dividing them into those showing either good, fair, or poor cicatrices, together with the number of deaths and the rate of mortality among those of each division:—

	Admitted.	Died.	Per cent of Deaths.
Vaccinated in infancy:			
Good cicatrix	332	33	9·93
Fair cicatrix	166	27	16·26
Poor cicatrix	301	68	22·59
Total vaccinated	799	128	16·
Not vaccinated	390	254	65·12

* This column includes the deaths that have occurred this year from among the three patients remaining in the hospital January 1, 1872.

A discrepancy of 38 between the number of admissions noted in this table and the number noted in other tables, finds explanation in the fact that some of the patients died unexamined.

Dr. Welch classifies as "good cicatrices" all those with a well-defined margin, slightly excavated, and pitted or honey-combed, as they are sometimes aptly described, while those presenting these characteristics to a much less degree he classified "fair," and those as "poor" which are so indistinct as to make it difficult to recognize them as vaccine scars. The proportion of deaths among the unvaccinated is enormous—double the ordinary death-rate, which has long been regarded as thirty-three per cent. Two reasons are assigned for this large mortality: the first and chief being the virulence of the epidemic; the second, that in many instances only the graver cases are sent to the hospital, and many of these not until all hope of recovery is past.

But the table teaches more than the great virulence of the epidemic. It demonstrates most clearly the protective power of vaccination, and more than this, for it also demonstrates, with equal clearness, that in the appearance of the vaccine cicatrices there is evidence to show the degree of protection afforded.

Then follows a very interesting table, which demonstrates that among the unvaccinated natives of the United States, the death-rate is 65·56 per cent.; of Germany, 47·37 per cent.; and of other nativities, including England, France, Canada, etc., 66·66 per cent. The death rates among the post-vaccinal cases compare as follows:—

United States, 16·62 per cent.; Germany, 10·4 per cent.; Ireland, 24 per cent.; other nativities, 17 per cent.; unknown nativities, 50 per cent. These figures show a very marked difference in favor of the vaccinations performed in Germany, Ireland giving the highest rate of mortality, while the United States stands midway between the two.

In speaking of the marked difference in favor of the vaccinations of Germany, Dr. Welch says:—"It is almost wholly due to the quality and source of the virus which they use. Their mode of vaccinating is from arm to arm, with the eight-day lymph, which is more reliable than the crust.

"To this fact I am able to bear testimony by my own personal experience, for when I was one of your vaccine physicians I embraced every opportunity to practise arm to arm vaccination, with the result very rarely, if ever, failing to develop a genuine vaccine vesicle in one who was susceptible to vaccina. Indeed, I have succeeded in this way where I had repeatedly failed with the crust. The vesicle which is secured by this mode must always be genuine, never spurious, provided that nothing but lymph be used from a vesicle that has not passed beyond its eighth day of development."

Illinois Medical Bill.—Illinois has just passed a bill forbidding any one practising medicine in that State without a diploma.

Dr. C. E. Brown-Séquard, who has been on a short visit to this country, will soon return to France. He remains abroad until September, when he will return to deliver his course of lectures at the Harvard Medical School. He gave a characteristic lecture on brain diseases before the Medical Library and Journal Association on the evening of April 12th, to a large and appreciative audience.

The Medical Diploma Trade.—The Committee of the Legislature of Pennsylvania, appointed to investigate the selling of medical diplomas by the Colleges of Philadelphia, have concluded their labors. It appears on evidence that the Philadelphia University of Medicine and Surgery, and the Eclectic Medical College of the same place, have been found guilty of selling diplomas. The most searching investigation of the regular medical schools has failed to disclose anything irregular or inconsistent with their high character as institutions of learning. The charters of the Philadelphia University of Medicine and Surgery, and of the Eclectic Medical College, have been revoked by a unanimous vote of the Pennsylvania Legislature. This ends the diploma traffic in Philadelphia.

Harvard University.—Dr. W. C. Tilden, Professor of Chemistry in Georgetown College, has been elected Professor of Chemistry in Harvard University.

The Presbyterian Hospital, N. Y.—The fourth annual meeting of the Managers of the Society of the Presbyterian Hospital was held April 10, 1872. The Executive Committee reported that the hospital building, now in course of erection, would be completed and ready for patients about the 1st of October next. The total receipts for the year, including last year's balance, was $221,040.40; the expenditures, $168,199.07.

Reproduction of the Membrana Tympani.—In the proceedings of the American Otological Society a case is narrated illustrating the almost complete reproduction of this membrane after its destruction by disease.

Four Italian Physicians have been chosen to be senators of the kingdom; viz., Professors Stanilaus, Cannizzaro, and Maggiorani, of Rome, and Porta, of Padua.

A New Medical Journal makes its appearance in France, which is to take the place of the *Journal de Médecine de Bordeaux*, and the *Union Médicale de la Gironde*, which have ceased to exist. The new journal is called *Le Bordeaux Médical*. It is issued semi-monthly, and is edited by MM. A. Demons, C. S. Donard, J. Perrens, and P. Vergely.

A Bougie à Boule, used by M. F. Guyon, and made by Collin, the successor of Charrière, and described in the *Journal de Méd. et de Chirurg.* of March, consists of an elastic bougie, which has for its foundation a number of fine wires. The bougie terminates in a screw, to which may be attached different sizes of the olive or pear-shaped tips resembling those now in use. These tips, when not in use, are for convenience screwed into the side of a plate.

Memory.—Haring, the physiologist, asserts that about the heaviest tax on the memory is that imposed by the profession of the pianist. Rubenstein recently played by heart a piece in which Prof. Schmidt counted no fewer than 62,990 notes.

Inoculating Syphilis by Vaccination.—According to Dr. Med. A. Walter, Physicist of the Circuit of Hoyerswerda, Gy., with its 31,169 inhabitants, not one case of this character has occurred during forty-one years' observation in that district. Such a calamity, he says, may be avoided by constant attention on the part of the physician. Many English, German, and French physicians, some of whom have vaccinated over 40,000 children each, testify that they have never known a case of such communication.

India-Rubber.—The supply of India-rubber is said to be inexhaustible. Each tree can be tapped for twenty successive years, and yields on an average three table-spoonfuls a day; 43,000 of these trees have been counted on a tract of thirty miles long by eight wide.

The Effect of the Chicago Fire.—This fire destroyed the Marine, Jewish, Woman's, Alexian Brothers' and the Small-pox Hospitals, and the Eye and Ear Infirmary. It consumed two homœopathic pharmacies (Halsey's and the North-Western), and more than a hundred wholesale and retail drug stores. Three medical colleges—the Rush, the Woman's, and the Bennett—were burned. Four medical periodicals—the *Chicago Medical Journal*, the *Medical Examiner*, the *Medical Investigator*, and the *Medical Times*—lost their offices, etc. Two hundred physicians lost their homes, offices, fixtures, libraries, instruments, and fields of practice; everything in a single night.

Anæsthesia.—Prof. Liebreich, of "chloral-hydrate" renown, is assiduously devoting himself to the discovery of an anæsthetic which will completely supersede chloroform, without any of its dangers.

Occupation in the Causation of Skin Disease.—Mr. Balmanno Squire, of London, an acknowledged authority on skin disease, affirms that the majority of the cases are found among book-binders, dyers, tanners, hatters, weavers, leather-cutters, fur-workers, all of whom have much to do with animal products.

M. Marey.—This distinguished sphygmograph observer, who is, perhaps, best known by his writings on the use of that instrument, has just been elected into the Section for Anatomy and Physiology of the Académie de Médecine.

Professor Huxley's health has greatly improved since his residence in Egypt.

The "Cottage System" for the Insane.—Dr. Kirkbride, of Philadelpha, in his last report of the Pennsylvania Hospital for the Insane, states that this proposed family system, no matter what size is adopted, takes away the facility of supervision, while the risks of accidents of various kinds, especially of escapes, personal injury, and of fire, are greatly and unnecessarily increased. His own experience with cottages and detached buildings, even at very short distances, long since led him to the conclusion that no building to be occupied by patients should be so far removed from the main structure as not to be connected with it by a covered way, well lighted at all times, and comfortably warmed in winter.

Impotency.—Prof. D. Hayes Agnew, of Philadelphia, Pa. (*Med. and Surg. Reporter*), in a clinical lecture on impotency, after stating that the treatment must be largely moral, and urging the abandonment of onanism or excessive venery, says that there is no better internal treatment than phosphorus and strychnia—1–50 grain of the former, and 1–30 of the latter—made into a pill, and administered three times daily.

Corpulence.—In the observation of thirty-eight persons, whose weight varied from 224 to 504 pounds, the late Dr. T. K. Chambers came to the following conclusions: the bony frame-work is less massive than in the spare, indicated by the smallness of the hands and feet. The skin is usually fresh-colored and thin; the respiratory functions present a universal and well-marked peculiarity, namely, the volume of air they are capable of taking in and expiring from the chest is considerably less than the average quantity contained and expired by healthy persons of equal height. The vital capacity is diminished, and less carbon is expired.

Dr. J. L. Cleveland, in an instructive paper on this subject in *The Clinic*, remarks that Dr. Chambers believed that defective sunlight was an important agent in developing fat. Though corpulent men are generally "surfeit swe.led," they are not always either large or gross eaters, but they are invariably great water-drinkers—taking large draughts. When corpulence is hereditary, it is then much more obstinate to treatment.

"Jackson's Cough Syrup."—According to the *Cin. Lancet and Observer*, the formula for this preparation has not been uniform, and therefore the Cincinnati College of Pharmacy has recently presented the subjoined one as a uniform standard: ℞. Fl. Ex. Ipecac, ℥ss. Fl. Ex. Senegæ (℥j. Rad. Senegæ to f℥j) ℥iij.; Fl. Extract Rhei, ℥iv.; Syr. Simplex. ℥xxxj.; Morphia Murias, gr. viij.; Ol. Sassafras, gttæ. xxxij. M. ft. mistura.

Hereafter, all prescriptions for this mixture will be prepared in that city on the above formula.

Traumatic Tetanus.—Clinton Cushing, M.D., Oakland, Cal. (*Pacific Med. and Surg. Journ.*), has successfully treated a case of this malady, under repeated doses of 1–12 grain of the English extract of the calabar bean, and 15 grains of the hydrate of chloral.

Ether as a Beverage.—In concluding some observations on the supposed mixing of chloral with beer, the *Chloralum Review* says that the practice of drinking sulphuric ether is on the increase in the north of Ireland, and that one Dublin manufacturer of ether sends the greater part of his production into the far northern counties, particularly Antrim.

For Huxley's Remarks on Special Senses, see *Med. Times and Gazette.*

The Kentucky State Medical Society held its Annual Meeting at Louisville, April 3d and 4th. The following officers were elected: *President*, Dr. Lewis Rogers, of Louisville; *Vice-Presidents*, Drs. James W. Thompson, of Paducah, and Joseph Smith, of Lexington; *Recording Secretary*, Dr. J. A. Larabee, of Louisville.

New York State Inebriate Asylum.—Dr. Turner, the founder of the New York State Inebriate Asylum at Binghamton, has written to Gov. Hoffman, saying that he will raise by subscription $66,000 to pay the bonds now due, and will give $5,000, provided Dr. Ray, Dr. Buler, and Dr. Nichols be appointed as Commissioners to reorganize the institution.

New Publications.

Injuries of Nerves and Their Consequences. By S. Weir Mitchell, M.D. Philadelphia: J. B. Lippincott & Co. 1872.

The Vienna Hospital Treatment of Venereal Diseases. By Dr. M. H. Henry, Ed. Journ. Syphilography and Dermatology. New York: W. Wood & Co. 1872.

Practical Lessons on the Nature and Treatment of Contagious Disease, etc. By John Morgan, M.D., F.R.C.S. London: Baillière, Tindall & Cox. 1872.

History of Medicine from the Earliest Ages to the Commencement of the Nineteenth Century. By Robley Dunglison, M.D., LL.D., and Edited by Richard J. Dunglison, M.D. Philadelphia: Lindsay & Blakiston. 1872.

The Urine and its Derangements, with the Application of Physiological Chemistry, etc. By Geo. Harley, M.D., F.R.S. Philadelphia: Lindsay & Blakiston. 1872.

American Medical Association.

TWENTY-THIRD MEETING.

The Twenty-third Annual Meeting of the American Medical Association was held in Philadelphia from the 7th to the 10th of May, inst., inclusive.

First Day, Tuesday, 7th May, 1872.

Dr. D. W. Yandell, President, in the Chair.

The Association assembled in the spacious Horticultural Hall, and was called to order at 11½ A.M. by the President, Prof. David W. Yandell, M.D., of Louisville, Ky.

At the Secretary's table sat Dr. Wm. B. Atkinson, Permanent Secretary, and Dr. D. Murray Cheston, Asst. Secretary, both of Philadelphia.

Prayer was offered by the Rt. Rev. Wm. Bacon Stevens, M.D., D.D., D.C.L., Bishop of the Protestant Episcopal Church in Eastern Pennsylvania.

ADDRESS OF WELCOME.

Prof. R. E. Rogers, M.D., Chairman of the Committee of Reception, welcomed the delegates, on behalf of the profession of Philadelphia, in the following address:

Gentlemen, Delegates to the American Medical Association: It is with unfeigned pleasure that, as Chairman of the Committee of Reception, on behalf of the medical profession of Philadelphia, I extend to you a sincere and cordial welcome to our midst. Gathered to-day in this hall are representatives of our profession from every quarter of this vast country, reaching from the city of the Golden Gate to the capes of the Chesapeake, from the granite hills of Maine to the waters of the Gulf of Mexico; covering a domain of twenty-four parallels of latitude and fifty degrees of longitude, and embracing a population, of whose health its members are the guardians, numbering not less than thirty-eight millions of men, women, and children.

With these boundaries this area possesses features of climate, a meteorology and geology, more diversified and extensive than those of any other single country on the face of the earth. What may we not hope of benefit to science and humanity from observations upon these in their connection with disease and hygiene, by so many intelligent laborers in the field?

Meeting here on this twenty-fifth anniversary of the organization of the American Medical Association, there are brought together men of every type, of high tone, loyal to their profession, strong men and true, men of sparkling genius and of varied and solid attainments, those who have grown gray in their vocation, laden with the golden harvest of a life's long experience, and those blessed with youth, energy, and ambition, engaged in laborious research, all ready to lay their individual contributions upon the altar of our profession.

In view of the reflections which here arise, what a spectacle of "moral grandeur" in possible achievement in the cause of suffering humanity does this assemblage present!

More than any other department of human knowledge does medicine appropriate the laws of the other positive sciences as parts of its organic whole, modifying and assimilating them, and finding in them sustenance, and warmth, and life. It is indeed the highest application of the truths of the other departments of knowledge, directed to the beneficent end of preserving health and assuaging physical pain. It may perhaps be not unaptly compared to some vast sea, receiving the contributions from a thousand perennial streams flowing from distant and widely separated regions, and then dispensing the commingled waters on the wings of the ever-moving winds, to spread their vivifying, renovating showers over the wide circuit of the globe.

Since the organization of our Association, as by curious coincidence, a new era has been inaugurated; marvellous progress has been made in the developments of science bearing upon human comfort and the mitigation of disease. Thus the electric telegraph, the vast extension of the iron track, the introduction of anæsthesia, and the device of various instruments of precision for the exploration and cure of the maladies of our race. These grand opportunities and great advances have been within the reach of all. Therefore, as a natural result, our numbers have continued to increase and the value of our transactions greatly to improve, thus securing an unabated prosperity to our organization.

Whatever qualification may be made as to the amount of positive knowledge contributed through such annually recurring gatherings as these, it cannot be denied that they exercise personally a most wholesome influence upon the members of the profession. They serve to strengthen old friendships and form new ones, to dissipate prejudices, to sustain self-respect, and cultivate a spirit of charity and humility; and, through the interchange of opinions and the abrasion of thought, to brush away the cobwebs from the dusty corners of our brains; to sharpen the battle-axe which has grown rusty with disuse; and to lift us out of the monotonous groove of life in which we have been wont to move; leaving pleasant and cheering memories, which, like the Arctic twilight, lingers in the sky to meet the coming dawn of the next returning day.

The present is the third occasion of our meeting in the city of Philadelphia, the earliest medical centre of our country, which has long since become the vigorous and lusty sire of many a stalwart son. And here let us congratulate ourselves and the world at large upon the vindication of those principles which have ever guided her medical affairs. As the genuine coin is liable to counterfeit, so have unscrupulous men aimed to speculate upon her fair name by spurious imitations. Thanks to a wise legislation, the atmosphere has been purified, and the parties engaged in the fraudulent issue of diplomas have been deprived of their charters, and their institutions abolished.

The first meetings of this Association were marked by harmony and good-will throughout; so may it be now, and may the blessing of the "Author of peace and Lover of concord" rest upon us and guide our deliberations!

Once more, then, my friends, offering you our warmest greetings, and a hearty welcome to our hospitalities, I give place to your further proceedings.

REPORT OF COMMITTEE OF ARRANGEMENTS.

Dr. Edward Hartshorne, of Philadelphia, Chairman of the Committee of Arrangements, added his cordial salutation to the greeting which had just been given, stating that he believed this the largest body ever assembled on a similar occasion. He then reported from the Committee the programme, as far as arranged.

Among the attractions he announced the formation, for the occasion, of a Museum of instruments and objects of professional and scientific interest, which would be open daily during the session, in the Hall of the College of Physicians.

In conclusion, he presented a list of three hundred and two delegates already registered, which was read by the Secretary.

PRESIDENT'S ADDRESS.

The President, Dr. Yandell, now delivered the Annual Address as follows:

Gentlemen: The migratory character of our Association is one of its best features. If it were stationary, its meetings would no doubt be attended by many, and it would, while conducted with wisdom and moderation, exert a good influence upon the profession all over the country. But its influence is incalculably enhanced by its journeyings from point to point. In this way multitudes are brought into sympathy with it who otherwise would never attend one of its meetings or read a page of its proceedings. Whatever else may be denied the Association, no one can hesitate to admit that it is grand in its annual migrations. No other medical body ever in the same time traversed spaces so vast. Last year we met on the western slopes of the Rocky Mountains, and sat with the sound of the many-voiced Pacific in our ears. This year we have assembled on the eastern side of the Alleghanies, and our foreheads are bathed in the gales of the Atlantic. None of us who were privileged to be present at that meeting in San Francisco can ever forget the circumstances attending it. We were introduced to a new world—trees, birds, quadrupeds of new species—an empire which, though the growth of but a quarter of a century, excites the wonder and admiration of mankind.

REMINISCENCES OF PHILADELPHIA.

If the novelty of the scene rendered our meeting in California one of peculiar interest, the meeting here is not less so on account of the historical associations of the city in which we are convened. San Francisco is the most recently erected of all our great cities. Philadelphia is the most ancient of all our great medical centres. It is, in a sense, the cradle of American medicine. Here medical teaching was formally inaugurated on this continent. We seem to hear again this morning the confident words of Dr. John Morgan, spoken one hundred and seven years ago, as he pleaded for the medical independence of the colonies, and proved to the satisfaction of the citizens of Philadelphia that the time had come when America should have a medical school of her own. That first faculty, composed of Morgan, Kuhn, Shippen, Bond, and Rush, rises to our mind as we enter on our duties here to-day. The old-school, elegant Shippen, sitting not very gracefully on his three chairs, and essaying to teach anatomy, and surgery, and midwifery. The rigid, stately Adam Kuhn, his hands and bosom in ruffles, his exuberant coarse hair done up by his hairdresser in the style of an imposing wig, presenting, with his gold-headed cane, a perfect picture of the grave doctor of the preceding age; punctual to the half minute, beginning his lectures just as the clock pealed its last stroke; waiting for the physician who was to meet him in consultation the five minutes of grace, then stalking out of the sick-room, perhaps to encounter his tardy brother on the stairway or the doorsteps, but hardly pausing long enough to hear the delinquent's excuse, and never turning back. Rigidly exact in his prescriptions, he has just ordered a patient some weak sage-tea. The kindly nurse meekly suggests, as he walks away, "I suppose, doctor, I may give the patient a little toast water or lemonade, too, if she craves it." And we see him turning round with the solemnity of one who seemed to feel that life hung upon his words, and hear his incisive reply: "I have said sage-tea. Good morning, madam." And how strangely sounds to us that declaration of the old Professor of Practice, made near the close of his life: "If called upon to say with what remedies I have done most good in my long practice, I should name the volatile alkali and wine whey."

But in that group of professors, untried as yet, rises far above the rest that figure so familiar to us all, with its meditative face and calm expansive brow, the philosophic, active-minded Rush. He has just returned from Edinburgh, where he listened to the lectures and enjoyed the friendship of the great Cullen. In all the five years of his pupilage, he tells us, he never wasted a day in amusement. He has entered into his profession with his whole soul. At the early age of twenty-four he is elected professor of chemistry. We pursue his steps along his brilliant course, as statesman, philanthropist, physician, author—a signer of the Declaration of Independence; a writer on temperance, on insanity, on medical education; author of medical histories so full and graphic that he is soon styled the American Sydenham. We see him year after year battling with the fever that devastated his city, and with his brethren about blood-letting. We read with absorbing interest his account of the wasting epidemic, and are thrilled by a passage in his diary, entered at the close of one of his terrible days, just after adopting a new mode of practice: "I have visited one hundred patients to-day, and, thank God, not one of them has died." His terse, sagacious remarks, repeated everywhere by his pupils till they became household words with the people, come back to us as we meet here, where he was so long the master spirit of the profession. Consulted by our grandfathers in Charleston, in Georgia, in the wilds of Kentucky and Tennessee, he was acknowledged everywhere as head of the profession in America. Students flocked to him as they had done before to Cullen, at Edinburgh, and to Boerhaave, at Leyden. Sitting here in his chair of Theory and Practice, he gave laws, as nearly as a physician could ever give laws, to the profession of a continent; and he has left behind him a name the most resounding in our medical annals.

With Rush, after a time, was Caspar Wistar, in Anatomy, which his eloquence made attractive. No medical man can hear Philadelphia named and not think of Wistar, whose work on Anatomy—the first work on the subject by an American—was long a text-book in all our medical schools.

Physick, too, rises up among the great names that gave renown to the school at a later period. Cold in manner, unsocial, but grand in the simplicity of his character, he walked the streets of Philadelphia five years, he has told us, before he made money enough to pay for his shoe-leather. And with him is associated the name of his nephew, Dorsey, author of the first American System of Surgery, who, unfortunately for the profession, was cut off in his early prime.

Prominent among the foremost was one whom many of you have seen—the first President of our Association—the generous, witty, genial, eloquent Chapman, upon whom fell the mantle of Rush when that great man left the earth. You who saw him at Baltimore twenty-four years ago, as he stood up to deliver his inaugural address, can never forget his form, his face, his voice, his whole bearing and manner, as that of one who felt that the dignity of a great profession rested on him.

In this city, too, lived for a short time, adorning the profession by his varied labors, the brilliant Godman,

at once physician, poet, and philosopher, but, like Dorsey, dying young.

The last link that bound the present with the past has just been parted. I allude to Dr. Samuel Jackson. Who that remembers his silvery locks, his sparkling eyes, and the sweet and winning smile that overspread his countenance, as he expounded his favorite doctrines, can wonder how readily they were accepted as true? What he was in the beginning and in his prime he continued to the last years of his patriarchial old age. Keen to perceive, eager to learn, earnest to instruct,—a man whose attachment to his profession was not that alone which springs from habit or from gratified ambition, but an ardent love, which burned brighter and brighter until it was extinguished by the hand of death.

With these eminent names are associated those of Dewees, Hare, Hartshorne, Hornor, Meigs, Mütter, Mitchell, Dunglison, and a long list of others that will live in history. They crowd upon our memories as we walk along the streets that once resounded with their footsteps, through a city rendered illustrious by their labors. They have left successors worthy of their great reputation, and who have made the air of Philadelphia luminous with their works.

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MEDICAL EDUCATION.

If there is a single question upon which Presidents and Committees of Education have agreed, from the first convention in New York down to the last utterance on the subject at San Francisco, it is that the American system of medical education is radically defective. The Association, year after year, has been invoked to remedy abuses and rescue the profession from impending degradation. The Association, indeed, originated in this widespread feeling of discontent with the prevalent condition of things in the profession. Reform was the watchword of the Convention which met in New York in 1846. Some of the best men in the profession, being convinced that nothing could be done without general co-operation, the Convention was called in the belief that this reform might be brought about. The members of that Convention came together with no very definite plans of action, but with a feeling that something must be done. The idea of reform has been the idea underlying the whole movement, and animating its most active members with a zeal which could hardly have been inspired by a less generous cause. The first meeting of the Convention was an encouraging one, and a second one was called to meet here. This Association was organized, and Chapman, then the foremost of the American teachers of medicine, opened his address the next spring, at Baltimore, with the declaration that "the profession to which we belong, once venerated on account of its antiquity, its various and profound science, its elegant literature, its polite accomplishments, its virtues, has become corrupt and degenerate, to the forfeiture of its social position, and with it the homage it formerly received spontaneously and universally." My old neighbor, Professor Henry Miller, in his address to the Association, at New Haven, indulged in the same strain. Borrowing the language of Dr. Drake, he declared that "even at this late period the profession abounds in students and practitioners who are radically deficient in spelling, grammar, etymology, descriptive geography, arithmetic, and, I might add, book-keeping, but that they generally apply themselves to the study of this important branch with a diligence that supplies the want of early opportunities." And he added: "A candid men who have had any experience in medical schools must confess that the examinations of the green-room annually reveal a sum of ignorance or of vague and misty perceptions of fundamental medical truth, even in many who are invested with the honors of the doctorate, which is truly amazing. For myself, I can most solemnly declare that the most mournful and humiliating passages in my professional life have been those annually recurring examinations in which such scanty harvests have been reaped as the reward of a winter's faithful toil." My distinguished and honored master, Professor Gross, has more recently expressed himself to the same effect. "The future," he declares, "holds out no promise of amendment. We shall go on from bad to worse, until the people can stand it no longer, and then we may hope to be able to effect some reform by our efforts as a great national Association. The medical schools are getting worse every year, lowering the standard of education. The time is near at hand when honorable men will cease to take any interest in medical teaching."

Dr. Baldwin, in his address at New Orleans, expressed his despair of seeing the evils of our system of education corrected through any of the agencies heretofore employed by the Association, and could see no mode by which it could be accomplished except Federal legislation—national medical schools incorporated by Congress. "Make the salaries of the professors large," he says, "and not to depend upon the number of students, and let the Federal Government assume a proper share of the expenses incurred."

It may be that it is because my temperament is more sanguine, or it may be because I am a younger man, and less experienced in the profession than most of those who have written in this way about its present state and future prospects; but whatever be the explanation, I have to confess that I do not share in these gloomy views and prognostications. Mine is a more cheerful creed. The profession does not appear to my mind "corrupt and degenerate." I do not believe "it is going from bad to worse," and that the people will have to rise in their majesty to stay its downward progress. I cannot see the thing in this light at all, and so am not ready to appeal to Federal legislation to correct our evils, and certainly should not go to Congress to establish national medical schools.

Beyond all controversy, there are grave defects in the education of many of our students and of our practitioners of medicine. Not a few of them, I am afraid, have very slight acquaintance with grammar or physical geography, and too many of them know little about etymology, and are bad spellers. It is a pity that this is so, and I should be glad to see a different state of things. But are things in this respect worse than they were in the time of our fathers? Has the case ever been otherwise, do you suppose, in all the history of medicine? At what period was the golden age when all who professed it were scholars, and all who aspired to its honors were worthy of them?

My learned friend, Dr. Baldwin, was a student in Transylvania University when that medical institution was at the height of its fame. When quoting with approbation the comment of Professor Drake and Professor Miller on the spelling and grammar of the students and physicians of our day, he could hardly have forgotten that two of the professors, at whose feet he sat with so much profit, were understood to be bad spellers, and by no means accurate in their grammar. I refer to the illustrious Dudley and his distinguished colleague, Dr. Wm. H. Richardson. Dr. Richardson was much less widely known than his associate, but history will record of him that, despite his grammatical inaccuracies,

which often raised a smile on the countenances of his pupils, he maintained himself in the school for twenty-six years, in fact from the organization of the first faculty down to the day of his death, by the side of such scholars as Caldwell, Cooke, Eberle, Nathan Smith, and Bartlett. Nor did I ever hear that his students, or those of his eminent associates, complained that the one cut with less dexterity for stone, or that the other was less successful as an obstetrician, on account of their imperfect English education.

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And, after all, I would submit most respectfully whether it is not possible we have attached too much importance to this humble accomplishment of spelling? A ludicrous blemish assuredly it is on the literary character of any one not to be able to spell correctly, and especially in any one belonging to a learned profession, and it places the individual at a great disadvantage. But I confess I am not able to see why it should prove fatal to success in life.

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Complaints similar to those so often repeated here, in regard to the education of medical students, reach us from other countries and from quarters whence we should least expect to hear them. The profession of Great Britain, with all that it has achieved, is by no means satisfied with the state of things in the medical colleges of that kingdom. "The students who come to our medical colleges," says a late English writer, "are, in a large proportion, deficient in preliminary education, and wholly untrained in any kind of scientific knowledge or method. They come too young, and too little instructed."

Education is, indeed, a plant of slow growth. Systems of education are perfected only by ages of infinite effort. Railways and telegraphs have wonderfully improved intercommunication between the nations of the earth, but art has not yet pointed out any royal road to learning. It takes a boy now as long to read or write a page, or to commit the multiplication table to memory, as it did our forefathers when travel was over miry roads in stage coaches or on horseback. The people learn slowly, and are hardly yet awake to the value of education; and our students of medicine come from the people. Of education it may be said as of nations—it cannot be created; it grows. No wonder, then, that students sometimes knock at the doors of our medical colleges who have not gone far into arithmetic or physical geography, and are "too little instructed" generally. But, while awarding censure, let us be just in its distribution. Let us ask ourselves whether those "vague and misty perceptions of fundamental medical truth," with which teachers complain of meeting occasionally "in the green-room," may not be somewhat chargeable to the learned professors themselves. "I have a strong impression," says Professor Huxley, "that the better a discourse is as an oration, the worse it is as a lecture." Possibly some of our teachers may have erred in that direction, and failed from excess of oratory; but I much fear that many more fail in exciting any interest in their pupils.

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But it is objected to our system of medical education that the schedule in our schools is too meagre, and Italy is cited as a country which furnishes us with an example worthy of our imitation. There, we are told, medical students hear lectures, among many other things, on geometry, botany, mineralogy, agriculture, and the principles of design. So many of our students out in the West and the South having served a faithful apprenticeship in the cornfield before coming to our schools, I hope agriculture may be omitted in our curriculum.

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But Germany is appealed to as the medical Utopia, where perfection in the system of medical education has been attained. Let me read you one of the schedules from that marvellous country, after which, it is proposed, the medical schools of America shall model their course of instruction. It embraces the following: 1. Philosophy; 2. Logic and Metaphysics; 3. Æsthetics; 4. Mathematics; 5. Encyclopædia and Methodology of Medical Science; 6. Botany; 7. Anatomy; 8. Nat. Philosophy; 9. Chemistry; 10. Zoology; 11. Physiology and Psychology; 12. Anthropology; 13. Mineralogy in its relations with Geognosy; 14. General Pathology and Therapeutics; 15. Materia Medica and Dietetics; 16. Practical Anatomy; 17. Special Pathology and Therapeutics; 18. Surgery; 19. Mental Diseases; 20. Obstetrics; 21. Pathological Anatomy; 22. Comparative Anatomy; 23. Pharmacy and the Art of Prescribing; 24. Epidemiology and Climatology; 25. State Medicine; 26. And in the hospitals: Clinical Medicine, Clinical Surgery, Clinical Ophthalmology, Obstetrical Clinics, Clinic of Skin Diseases and of Syphilis, and Chemical Physiology and Pathology.

Germany, at this day, aspires to be the leading nation of the earth in thought, in philosophy, in philology, in science, as well as in arms. In perseverance, in industry, in love of science for its own sake, in deep learning—let us admit that no people on earth exceed them. Medicine is cultivated among them with unwearied zeal and assiduity. They have hospitals on the grandest scale; their laboratories are the most ample and the best furnished; and all the appliances are to be found in their universities for imparting to students the most thorough knowledge of whatever science or profession they would pursue. Subjects for anatomical study cost a mere trifle. Autopsies by experts abound in the dead-rooms of their hospitals.

Students are taught æsthetics, metaphysics, the methodology of medical science, logic, anthropology, geognosy, and the twenty other branches named in their curriculum. And what, let me ask in a spirit of perfect candor, has it all amounted to? In histology, in pathological anatomy, in microscopy, in animal chemistry, their superiority is conceded. In surgery and in midwifery, too, we all admit their claims to the highest rank. But the practice of physic in Germany—is it, at this time, little more than a meditation on death? Have not placebos taken the place of remedies in their hospitals? Standing idly by while disease is running its course, curiously marking its natural history, looking on calmly, while death and life-in-death are throwing the dice, and waiting to see whether nature will lose or win in this struggle—the physicians seem intent mainly on tracing its ravages in the cadaver, too well satisfied to find their diagnosis confirmed by the autopsy. These vast stores of science treasured up by the German mind through these centuries, in what have they resulted? As to therapeutics, in something hardly better than nihilism; as to physiology, in a materialism which not only abolishes religion, but renders any religious belief impossible. To this ghastly complexion, it may be, American medicine must come at last, but I am sure no philanthropist can be impatient to see the day.

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Reduced to the last analysis, what is it that the people demand of us as instructors? To give them physicians learned in the languages, or physicians who can discharge the duties of their profession efficiently and well? Men who can chop logic, or surgeons who can amputate limbs, or set them, or reduce them? Scholars expert

in metaphysics, or doctors skilled in the practice of physic? And are not the schools turning out such practitioners? In the main, I believe they are, and of higher grade every year. But if I could agree to the German curriculum in all its amplitude, I should still object to the place assigned in it to clinical teaching. With his course on "æsthetics," my student should begin the study of medical and surgical diseases at the bedside. Clinical instruction, in the schedule I would draw up, should be the alpha and omega of the student; and whether he was studying geology or logic, he should spend a part of every day examining the cases of sick men, women, and children. After making himself master of his art, he might stray as far as he inclined into the tempting fields of literature and natural history, provided his patients raised no warning voice against it.

We are continually reminded in annual reports that while our schools teach too little, there are quite too many of them. I think this is true; but what is to be done about it? Who will say how many schools we shall have, and where? Who has the power to silence one of them? Can we hope to bring our cold, wise maxims of experience so to bear upon the wing of young ambition as to repress it, or to quench the ardor of the youthful spirits who feel that they have a vocation to teach? Time is the only remedy I can see for this sore evil under the sun. Under the pressure of an enlightened public opinion, operating in part through this body for a long series of years, it must give way at last. The schools are obliged to gravitate in time to their places. Those that teach well will be sustained; the inferior will go under. Twenty-two years ago, in a speech I had the temerity to make before this Association at Cincinnati, I ventured to predict that no school without an ample supply of subjects and adequate means of clinical instruction could long sustain itself. Time is fully justifying my prediction. And to this test I am satisfied all the medical schools in the world must finally be brought. It is not by logic, or the principles of design, or Greek, or Latin, or French, or German, that medical education is to be rendered what it ought to be; but by studying medicine in the laboratory, under the microscope, at the dissecting table, in the wards of hospitals and in dispensaries, where patients are seen, examined, and prescribed for, and where, by attending to what are now so often styled the refinements of chemistry and physics, students learn the diagnosis of disease as well as its treatment.

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We labor in vain when we get too far in advance of the people. If we write, it is in the hope of being read; and if we find no readers, our writings, however admirable, are to no purpose. Bring to our country the books produced by the ablest of German authors, and how many would be read? Is Rokitansky, or Vogel, or Chelius, or Rindfleisch, or Virchow? By a few, no doubt, they would be read, but they are "caviar to the general." It is not in the direction of such research that the medical mind of America has been running hitherto or is yet running. In time it may take that direction, but treatises less elaborate, of less detail, more pointed, and more practical, are what the profession demands just now.

[After devoting some time to detailing the labors of Dr. Drake, and the neglect into which his book had fallen, the speaker continued:]

Very similar, I apprehend, would be the appreciation of the people generally of graduates in medicine educated up to the standard of this model curriculum. In a few favored communities it is possible their stores of metaphysics and æsthetics, of geology and mineralogy, might be prized at their true value; but to the plain, common people these stores would seem little better than "loads of learned lumber." Nay, worse, for too many would conclude that a doctor who had dipped into so many arts and sciences could not have drunk deep of medicine.

When the world's exposition was in progress at London, it was affirmed by the critics that the only thing in which Americans excelled all other people was "rugged utility." It is in the line of "rugged utility" that medicine with us has advanced with most eminent success. It is in this respect that it is regarded with most favor by the people everywhere. But this is not the only line in which the progress of American medicine has begun to attract the attention of the world. It is developing in all directions and producing authors of acknowledged merit, as well as learned teachers, skilful surgeons and physicians. No one who has been familiar with British medical journals for the last twenty-five years can have failed to note their altered tone in respect to the profession here. . . . No one of them all would deny that, as a profession, we are every year preferring claims to higher consideration. This, indeed, is a fact as clear to every observer as the growth of our population, or as our advancement in the mechanic arts and all the elements of national power. Nor is this any partial movement, but an advance all along the line. It has been well compared to those grand geological changes by which continents are slowly elevated above the level of the sea. The quickening impulse is one which has been felt by the profession to its remotest extremities. The medical schools have acknowledged it, and are generally improving their processes of instruction. In most of them the lecture term has been extended, the number of professorships has been increased, and the teaching has been rendered more demonstrative. Harvard has inaugurated a part of the system so strongly urged upon the schools, and if it is found to work well, it will be universally adopted. The graduates leaving the schools, though they may know less of Greek and mathematics, are far better trained than formerly in clinical medicine and surgery, and better qualified to enter upon their duties as practitioners. Almost every town in every State boasts a surgeon who will attempt lithotomy, and at every crossroad you will find one conversant with physical diagnosis, and who can put up a fractured limb or reduce a dislocation. They are, moreover, as a class, men who read and know how to keep pace with the march of medicine. One or more of our medical journals you will find on every physician's table, and so it happens that whatever is discovered or conjectured in Great Britain, or on the continent of Europe, in the spring, reaches him at his remote home by the beginning of summer. While returning from California a year ago, in company with a number of friends now present, the train stopped at a water tank about which had been built by laborers and miners a few frame shanties. A man in the garb of a miner entered the car, and asked if some physician on the train would not step over to his house and see a sick child. I went with him. The patient was a little boy suffering from some head-trouble following measles. He was being calmed during the day by the bromide of potassium, and soothed to sleep at night by the hydrate of chloral. In the pine-board hut occupied as home and office by the doctor of the settlement lay a medical journal of the current month, from the pages of which he gathered the latest utterances of the masters and the newest therapeutic discoveries of the day. There, in those mountain fastnesses, among that rude

people, a thousand miles removed from the haunts of civilization, where in his lonely rides he saw more antelopes than fellow-men, and heard oftener the shrill yelp of the coyote than the voice of a friend, this hardy pioneer in our art rendered to the sick boy of the unlettered miner the same succor that was given by his more fortunate brother to the greatest and richest denizens of the cities, to the very princes of the earth themselves.

There remains yet much to do in our educational system; nor, quoting the thought from Seneca, will the opportunity be wanting to those born after a thousand ages to add something to it. But I think it must strike you all as somewhat unaccountable that results so satisfactory as those just adverted to should flow from a system so essentially bad as ours is represented to be. Is it not something wonderful that these learned authors, these admired teachers, these safe, sagacious practitioners should have come from schools so wanting in all the means of imparting a good medical education; that, in a word, sons so sturdy should descend from starveling parents? For we must not fail to remark that these men, of whom our country is proud, were, in very large proportion, educated at home—they are of domestic manufacture. The education of all but a few of them was commenced and completed in our own institutions.

THE WOMAN QUESTION.

Before sitting down I must allude briefly to another question . . . . . woman's right to enter the professions, to become a member of all learned bodies, to do all that she is fitted to do.

Woman is not, as was ungallantly held by Aristotle, an imperfect man, an ill-formed, imbecile being; but in development is as perfect in her sphere as man is in his. Men and women are indeed differentiated beings, one the complement of the other. Each has mental and physical peculiarities, and it is as absurd to think of obliterating the one class as the other by education or any possible system of training. . . . . As to equality in physical strength, I believe it has never been claimed. The male in all nations, civilized and barbarous, is the larger and stronger. Anatomy as conclusively settles the question of intellectual equality. The brain of man is, on an average, larger than that of woman, and, other things being equal, size gives strength. . . . . But all male heads are not of greater size than the female, and it is far from being true men are universally stronger in intellect than women.

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Woman makes a better nurse than our sex. . . . . How natural the conclusion, if better nurses, why not at least as good physicians? In all candor I must say I am unable to find a satisfactory reason why women might not succeed in some lines of our profession. Certain paths there are which for the honor of the sex, I hope they will not aspire to tread. . . . . I trust not many will incline to surgery. Very few indeed, I think, would have the nerve to cut for stone in the bladder, or perform ovariotomy. But in fact, in grace, in gentleness, they might presume torival us, and with these pleasing qualities would be welcome visitors to many a sick-chamber.

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The best proof that women may make learned doctors is the fact that in times past, if medical history is to be credited, they have given to the profession members of true erudition. Women taught side by side with men in the first medical school established in the Christian era. Of the names associated with the School of Salernum, none appeared more respectable for scientific zeal and attainment than those of three female professors, Trotula, Rebecca, and Abella, who were ready to grapple with the toughest subjects in physiology and medicine. Trotula wrote a dissertation with which many here, I suppose, are well acquainted—*De Mulieribus Passionibus;* and so profound was her medical scholarship that when a great disputant, Rudolph Mala Corona, went to this seat of learning to try conclusions in science with its professors, she alone was deemed by him a worthy antagonist. Her sister professor, Abella, was a poet-physician, and indited a treatise—*De Atrabile et de Natura Seminis Masculini*, in Latin verse. The taste of the learned Rebecca inclined her to the same line of investigation, and the work which has come down to our times from her pen treats *de Urina et de Embryone.* These mothers in medicine, however, were not prolific; they left no successors worthy their of fame, and their example has not many imitators in the centuries since they flourished.

I have strong doubts whether female physicians will ever become very numerous. Their own sex does not incline very much to them. The movement which is now startling the world with its din will probably end in no great results. But it depends on the public. What the people decree in this matter is a law to which all, we and the women alike, must bow submissively. If they want women doctors, such will be found ready to meet the demand. If those now pressing forward in their studies so eagerly find their services are not wanted, they will take down their signs, get married—if they can—or turn lecturers, or to some more lucrative employment. I hope they will never embarrass us by a personal application for seats in this Association. I could not vote for that.

[The address closed by referring to the beneficent influence of the Association, and expressing the hope that it might "be perpetual, and more and more a rallying-point and a tower of strength for the profession over the whole wide continent."]

MEMBERS BY INVITATION.

On motion, the following gentlemen were admitted to seats as members by invitation: Morris J. Asch, M.D., Surgeon U. S. A.; M. W. Junkins, M.D, of Bellaire, Ohio; and D. D. Mahon, M.D., of Mifflin Co., Pa.

ADMISSION OF DELEGATES.

A motion was carried that the list of delegates, as far as presented, be accepted.

Dr. Askew, of Delaware, offered the following:

Resolved, That all questions of a personal character, including complaints and protests, and all questions on credentials, be referred at once, after the report of the Committee of Arrangements or other presentation, to the Committee on Ethics, without discussion.

Dr. Mussey, of Ohio, wanted questions of a personal character referred to the Committee on Ethics, and questions of the eligibility of societies to representation decided by the Association without such reference. He offered an amendment to this effect, which was seconded by Dr. Jacobi, of N. Y.

Dr. Porter, of Delaware, made an earnest appeal in favor of his colleague's motion, to save the time of the Association, and give all cases a fairer consideration than would otherwise be possible.

The President explained that the motion was in accordance with the custom of the Association for several years past.

Dr. E. Hartshorne said the Committee of Arrange-

ments could not see why every question on credentials was not a personal one.

Dr. Mussey only wanted a fair hearing for everbody.

Dr. Hartshorne explained.

Dr. N. S. Davis, of Chicago, began to state the purpose of the motion, whereat a delegate grew irate and called to order. Dr. D. continued, showing that the reference of all these questions was indispensable if the Association would have any time left for science. All rights were safe, for the Committee's report must be passed upon by the Association.

Dr. H. I. Bowditch, of Boston, feared the Committee on Ethics might keep members out of their rightful seats for a day or more, while waiting to make up its report.

Dr. A. B. Palmer, of Mich., offered a substitute.

Dr. Bronson, of Mass., thought Dr. Bowditch's just anxiety might be relieved by an amendment to Dr. Askew's motion, requiring the Committee on Ethics to report at the earliest practicable moment.

Dr. Hartshorne explained again. Finally, to the relief of every one,

Dr. Morris, of Md., moved the previous question, which was ordered; and Dr. Askew's motion was carried unanimously.

PAPERS PRESENTED AND REFERRED.

Dr. F. W. Hatch, of Cal., presented a Report on the *Climatology of California;* referred to the Section of Meteorology and Epidemics.

Dr. W. F. Thoms, of N. Y., presented a Report on the *Climatology of New York;* referred to same.

Dr. E. R. Fiske, of Oregon, reported progress on a similar report, and was continued.

Dr. G. W. Lawrence, of Ark., had, after two years, prepared an elaborate Report on the *Climatology of Arkansas*, which he presented, but a map was still to be furnished; referred to Section as above.

Dr. L. P. Bush, of Del., presented a Report on the *Climatology of Delaware;* referred to same.

Dr. H. Knapp, of N. York, presented a paper on *Methods of Extraction of Cataract;* referred to Section of Surgery and Anatomy.

Dr. E. A. Hildreth, of West Va., presented a Report on the *Climatology of West Virginia;* referred to Section of Meteorology and Epidemics.

Dr. Joseph Jones, of New Orleans, presented a paper on *Yellow Fever;* referred to Section of Practice of Medicine and Obstetrics.

Dr. S. Fitch, of Portland, Me., presented a paper entitled *Three Ovariotomists;* referred to same.

Dr. M. Simmons, of S. C., presented a Report on the *Climatology of South Carolina;* referred to Section of Meteorology and Epidemics.

COMMITTEE ON ETHICS.

The President announced his appointment of the following gentlemen to constitute the Committee on Ethics:—Dr. H. F. Askew, of Wilmington, Del.; Dr. N. S. Davis, of Chicago, Ill.; Dr. Calvin Seavey, of Bangor, Me.; Dr. J. K. Bartlett, of Milwaukee, Wis.; and Dr. S. D. Gross, of Philadelphia, Pa.

Adjourned to 10 A.M. Wednesday.

Tuesday Evening.

In the evening a reception was given by the Biological and Microscopical Section of the Academy of Natural Sciences of Philadelphia. The floor of the main hall was cleared for promenade, and the fair matrons and maidens of Philadelphia made their appearance on the scene. Music by a fine orchestra, conversation, and general good humor, were the order of the hour.

In the upper hall there were exhibited under a hundred microscopes a large number of specimens; several improved spectroscopes were demonstrating the beauty and delicacy of their analysis; and everything was being explained to the curious of both sexes by the Biological Society's ubiquitous and indefatigable Committee of Arrangements.

Second Day, Wednesday, 8th May.

In the absence of the President, the meeting was called to order at 10 o'clock, by Dr. Thomas M. Logan, of California, First Vice-President, who announced the first business to be the election, by the delegation of each State and Territory, of one of its number, to constitute a Committee on Nomination of Officers for the ensuing year, and to propose the place of meeting. For this purpose a recess of fifteen minutes was ordered.

The acoustic properties of Horticultural Hall having proved very poor, the Association re-assembled, after the recess, in the church of the Rev. Dr. Wylie, about a block distant, the President, Dr. Yandell, taking the chair.

The Secretary announced that the members were invited to visit the Surgical and Orthopœdical gymnasium of Dr. Benjamin Lee. Also that, for the evening, receptions were tendered to the delegates and their ladies by Dr. Hugh L. Hodge; and Dr. William H. Pancoast, his father, Dr. Joseph Pancoast, who had issued cards of invitation, having been suddenly compelled to leave town.

The names of the Nominating Committee were now read, and its members withdrew to deliberate. It was constituted as follows: *Ark.*, R. G. Jennings; *Ala.*, W. O. Baldwin; *Cal.*, W. R. Cluness; *Colorado*, W. F. McClellan; *Conn.*, Sylvester W. Turner; *Del.*, I. Jump; *D. C.*, S. C. Busey; *Ga.*, W. F. Westmoreland; *Ill.*, W. A. Knox; *Ind.*, W. A. Myers; *Iowa*, W. F. Peck; *Kansas*, ——; *Ky.*, Lewis Rogers; *Me.*, S. Fitch; *Md.*, J. Morris; *Mass.*, H. I. Bowditch; *Mich.*, Stockwell; *Minnesota*, A. J. Stone: *Miss.*, B. A. Vaughan; *Mo.*, Edward Montgomery; *Nebraska*, ——; *Nevada*, J. C. Tucker; *N. C.*,——; *N. H.*, J. H. Wheeler; *N. J.*, T. J. Thomason; *N. Y.*, Wm. C. Wey; *O.*, C. G. Comegys; *Oregon*, T. M. Logan. *Pa.*, Robt. E. Rogers; *R. I.*, F. H. Peckham; *S. C.*, Kimlock; *Tenn.*, Wm. Finlay; *Texas*, S. Dowell; *Va.*, J. B. McCaw; *Vt.*, ——; *W. Va.*, R. H. Cumines; *Wis.*, J. T. Reeve; *U. S. Army*, J. J. Woodward; *U. S. Navy*, Geo. Clymer.

MEMBERS BY INVITATION.

Dr. R. E. Rogers, of Philadelphia, desired to offer a resolution which became necessary in consequence of the fact that the Faculty of the University of Virginia had not sent delegates to the Association. Their system of education being peculiar, but of very high standard, they had some hesitation as to the propriety of sending delegates. His resolution was that Dr. J. Edgar Chancellor, of the University of Virginia, be invited to take a seat in the Association. This was agreed to after amendment by adding the names of Dr. H. C. Bickford, Mass.; G. H. W. Herrick, Mass.; A. H. Schaeffer, Ind.; and E. C. Cross, Minn.

AMENDMENT TO BY-LAWS.

Dr. Bronson, of Mass., offered as an amendment to the By-laws, the following:

Resolved, That the Committee on Ethics, to consist of seven members, be elected by the Nominating Committee.

The Chair decided the motion lost on *viva voce* vote, and a division of the house was called for, pending which

Dr. Bronson said: I was about to say that, at the organization of this Association, the questions which came before the Committee on Ethics were of very little interest to a large portion of this convention. Such a committee was considered of so little importance that it was not originally provided for by our constitution or by-laws. But within the last few years every gentleman familiar with the acts of the Association is aware that discordant elements have been introduced, which have consumed the time of the body and produced friction among its members. This has been owing in part to the fact that the presiding officers of this Association have enjoyed and exercised the right of appointing the Committee on Ethics. If the President had any special predilections on this or that question, he would be very apt to appoint a committee in sympathy with him. With the view, therefore, of correcting this evil, it has occurred to me that if each state and territory had a voice in the formation of that committee, the difficulty would be removed; that it would prove a balm and a poultice to this Association. This was my object in introducing the resolution—not that I had anything to say against the action of any of our Presidents; for they have all acted as I would, no doubt, have done myself.

On division the motion was lost by affirmative 167, negative 187.

A NEW REMEDY.

Dr. Van Bibber, of Baltimore, asked that the Association appoint a special committee to examine the merits of a remedy which he held in his hand, but the name of which he did not know. It was a substitute for quinine.

The remedy was referred to the Section of Chemistry and Materia Medica.

THE MASSACHUSETTS MEDICAL SOCIETY.

Dr. N. S. Davis, of Chicago.—I hold in my hand a preamble and resolutions which seem to me calculated to do good in at least one section of our country, and I see nothing in them to which any man could object. I am sure that as the Massachusetts association is carrying the matter now to the civil courts, if we can give them a word of encouragement, it will be of service.

Whereas, it has been represented that the Massachusetts Medical Society considered that its delegation to the annual meeting of the American Medical Association, in Washington, in 1870, was unjustly excluded by the committee of arrangements, and whereas the action of the Committee on Ethics, at the same meeting, in refusing to allow the right of the said Committee of Arrangements to detain the Massachusetts delegation, was unauthorized by a majority of the members of that committee,

Resolved, therefore, that the Association acknowledge the great and effective efforts of the Massachusetts Medical Society to elevate the profession, and suppress quackery of all sorts, and that the Association encourage it in its exertions to rid itself of all pretenders.

Resolved, that the Association trusts that hereafter there will be a united and harmonious action of all the several bodies of which it may be composed.

On motion of Dr. Howard, of Baltimore, the matter was referred to the Committee on Ethics.

THERMOMETERS.

The Secretary asked that Dr. Edouard Seguin, of New York, be permitted to exhibit his clinical thermometers and describe their use.

Dr. Davis opposed this violation of the rules as establishing a troublesome precedent.

The President remarked that he was accused the day before of being discourteous, and he was now disposed to exercise all the courtesy possible.

Dr. Seguin was referred to the Section of Practical Medicine and Obstetrics.

REPORT ON PUBLICATION.

Dr. Francis Gurney Smith, of Philadelphia, Chairman of the Committee on Publication, presented its Report. It set forth that 750 copies of the Transactions of the Society had been published, at a cost of $1,549.39. Of these 475 volumes were distributed, including 23 to various medical journals, and 88 copies were still due to members. The work was completed and issued early in November. The report concluded by reminding the members of a resolution passed in 1870 that all members who failed to reply to the committee's circular within one year forfeited their right to a copy of the Transactions.

REPORT OF TREASURER.

Dr. Caspar Wister, of Philadelphia, Treasurer, reported that the Association last year exercised a praiseworthy discrimination in the selection of the material furnished for publication, and consequently the volume of transactions was smaller, cheaper, and more desirable to the profession than heretofore. The edition was published at a price which left a balance on hand for the use of the Association when it may hereafter become forgetful of its prudence, and refer a great mass of manuscript for publication. Concerning matter so referred the Publication Committee had no discretionary power, but was compelled to print it all.

He counselled care in the adoption of prize essays, which annually depleted the treasury of $200 that it could ill afford.

The balance sheet showed $1,005 on hand, some $300 more than last year.

The President called attention to the great importance of the Treasurer's suggestion regarding the commitment for publication of voluminous and worthless matter. He hoped some remedy would be found.

REPORT ON MEDICAL EDUCATION.

Dr. J. S. Weatherly, of Alabama, Chairman of the Committee on Medical Education, presented a Report signed by himself and Dr. J. M. Toner. It said the Association was formed for the improvement of the profession in this country, and if it had effected little in the way of reform, this was certainly not the fault of its committees. That our present system of education was in a bad way there was no doubt. The disease was patent and the diagnosis easy enough; but the treatment had proved a hard matter: cheap colleges, dependent on tuition and diploma-fees, exacting no preparatory training, no compulsory attendance of lectures and but a superficial final examination were our ruin; but how should we help it? The European schools were better than ours, but their system was impracticable here; "we were going too fast to have the brakes of the old world applied to us."

The Committee fell back on the plan of memorializing the state authorities to grant no charters to new colleges which should fail to adopt a system to be hereafter recommended by the Association, and to revoke the charters of all existing ones which should refuse to conform to it. A national medical college, as recommended by President Baldwin in 1869, would doubtless have a good effect in stimulating other institutions to come up to its standard. The army and navy examinations had already a similar tendency.

In lieu of the plan of a National Academy of Medicine, suggested by Dr. Moses, with such qualifications

for membership as should make it a high honor to gain admission, the committee proposed that some badge or medal be fixed upon by the American Medical Association, to be conferred upon its own members, in token of the honor attaching to their fellowship in so distinguished a body.

Instead of the annual volume of *Transactions*, the committee would have the Association publish a monthly journal, especially devoted to the reform of medical education, and a high standard of medical literature, the editors to be elected annually by the Association. It is confidently believed that not only the profession but also the people would be favorably influenced by this means, as the journal would be read by many who never see the *Transactions*.

The committee recommended that the Association take decided action to make itself felt as the head of the profession in the United States, by demanding a proper standard of membership, and by publishing to the world that colleges which do not observe certain rules shall not be entitled to representation. To establish these rules, the committee urged that a congress composed of delegates from the medical colleges assemble to fix upon some uniform and improved plan of medical instruction, which should be recognized as the only system of medical instruction in this country.

A special committee was asked for, to report, at the present session, upon the suggestions contained in the report.

The report was referred to the Committee on Publication.

REPORT OF LIBRARIAN.

Dr. F. A. Ashford, D.C., Librarian, reported a considerable increase in the library, and submitted a full catalogue. He suggested that the volumes of the *Transactions* now on hand be placed in his hands to be exchanged for books upon other subjects. No money had been received by him.

The report was referred to the Committee on Publication.

REPORT ON PRIZE ESSAYS.

Dr. Francis G. Smith, Philadelphia, of the Committee on Prize Essays, in the absence of its Chairman, Dr. Stillé, due to a recent bereavement, reported:

Four essays were submitted to the Committee; of these one was withdrawn by its author, and the remaining three were carefully examined by the Committee. Two of them did not fulfil the conditions which are to determine the disposition of the prize. The third one did—that is, it presented the condition of original research. The title of that essay is, "*What physiological value has phosphorus as an organismal element?*" It bears a Latin motto—"*Ne tentes, aut (sed?) perfice,*" and (opening the corresponding envelope) the name of the author is Samuel R. Percy, M.D., of New York city.

REPORT ON MEDICAL LITERATURE.

Dr. Theophilus Parvin, Chairman of the Committee on Medical Literature, in the course of a long and highly ornate report, said that if it were possible for the Committee to perform its functions as defined twenty-five years ago, and prepare a report on the more important journals and other publications, foreign as well as domestic, of the year, and make reference to "all such matters as may be deemed advisable for encouraging and maintaining a national literature of our own," the reading of such a report would demand a protracted session and its publication would bankrupt the treasury. We had now an American medical literature of which we might justly be proud, and which challenged the respect of the profession abroad. The very city of Philadelphia had produced works which would make quite a library of themselves, and without which no medical library, however vast and various its volumes, would be complete. It would not be deemed invidious if he made special mention of four of its living authors, George B. Wood, Hugh L. Hodge, Isaac Hayes, and Samuel D. Gross.

Our literature was practical in character. Although we might boast of the grace and beauty with which Dr. Chapman clothed his thoughts; of the flashing declarations of the late Dr. Meigs; of the calm dignity and polished periods of Dr. Wood, yet, generally, our American authors gave less heed to language than to ideas. The American was a man of business, and if an author wished to catch the ear of an American physician, he must have something useful to say, and must say it quickly.

The report strongly advocated an international copyright law, as conducive to the best interests alike of authors, publishers, and the profession at large.

It followed up the idea recommended in Dr. Weatherly's report, and warmly demanded that the Association replace its yearly *Transactions*, of which some six hundred copies were issued, and perhaps half of them read, by a national medical journal, that should command a larger audience and a stronger influence, and of necessity draw out better contributions. Such a journal would be free from prejudice in favor of any publisher, or college, or local clique, a charge to which too many medical periodicals were liable, though there were honorable exceptions. Its editors would have no favors to ask and no fear of giving offence; and would keep clear of such papers as too often get into the *Transactions*, that nine out of ten editors would reject. In a style of the highest literary merit, the national journal should present the best thought in theory, and the latest improvements in practice; and, rising to the æsthetic and the moral sphere, it should "train the physician to a higher life."

The Committee did not endorse the suggestion, made in 1849 and renewed in 1863, that the Association publish works after the plan of the Sydenham Society. Good books had no difficulty in finding publishers. It did recommend, however, the appointment of a competent Commission, which should be empowered to examine manuscripts, and set the seal of the Association's approval upon them.

The Report closed with the very practical suggestion that, instead of offering annually two prizes of one hundred dollars each, the Association should offer a single prize of six hundred dollars, triennially, for the best essay presented during the three years.

Referred to the Committee on Publication.

The President announced that a paper presented for the prize had been received too late for examination, and it was deposited with the Secretary for the author.

The Secretary announced certain papers received, for reference, under the resolution of yesterday, to the Committee on Ethics.

Dr. Bronson, Mass., asked their titles, that any members interested might be at the hearing before the Committee, and was informed by the Chair that it was the custom of the Committee to *send* for persons and papers.

REPORT ON MEDICAL NECROLOGY.

Dr. J. D. Jackson, Ky., Chairman of the Committee on American Medical Necrology, submitted its Report, which was referred, without reading, to the Committee on Publication.

PAPERS, ETC., PRESENTED AND REFERRED.

The Secretary announced the following by title, and they were appropriately referred:

By Dr. J. G. Richardson, Philadelphia, a paper on *The Structure of the White Blood-Corpuscles:* to the Section of Medical Jurisprudence, Hygiene, and Physiology.

By Dr. Henry Hartshorne, Philadelphia, a paper on *Vaso-Motor Physiology:* to the same.

By Dr. J. Pancoast, through Dr. S. B. Merkel, Philadelphia, the *Case of George Thomas*, a colored man, said to be able to displace his heart, stop its beating at will, and roll his belly in a wonderful way: to the Section of Surgery and Anatomy.

By Dr. W. F. Peck, Iowa, a paper on *Operation at the Hip-Joint*, with details of a case: to the same.

By Dr. Harrison Allen, Philadelphia, a paper on *The Soft Palate in Health and Disease:* to the same.

By Dr. W. H. Mussey, Cincinnati, a paper on *Electrolysis in Cancer;* also one on *a Case of Vesical Calculus and Polypi of the Prostate:* to the same.

By Dr. J. S. Packard, Philadelphia, *A Suspensive Apparatus for Fracture of Leg, and a Splint for Excision of Knee:* to the same.

By Dr. J. P. Garrish, New York, a paper on *The Use of Instruments in Obstetrics:* to the Section of Practical Medicines and Obstetrics.

By Dr. George M. Beard, New York, a paper on *Recent Researches in Electro-Therapeutics:* to the same.

By Dr. C. F. Perkins, Pa., a paper on *Intemperance;* also one on *A New Method of Swimming:* to the same.

By Dr. E. M. Hunt, N. J., *Report on the Climatology and Epidemics of New Jersey:* to the section of Meteorology, Medical Topography, and Epidemic Diseases.

By Dr. P. K. Hoy, Wis., a paper on *Four Cases of Fracture of the Femur:* to the Section of Surgery and Anatomy.

By Dr. P. Pineo, Mass., *Report of the U. S. Marine Hospital Service:* to the Section of Practical Medicine and Obstetrics.

CONTRACT PRACTICE.

Dr. Wm. R. Findley, Pa., presented a resolution which declared that as the Association, in 1869, unanimously adopted a resolution classing all who practised medicine on the "contract system" with "irregular practitioners," and as this action had excited considerable controversy in many of the county societies, whose members had misunderstood the meaning of the resolution, it was therefore important that the Committee on Ethics define the true significance of the phrase "contract physicians" as employed in the resolution.

Referred to the Committee on Ethics.

COMPARATIVE PATHOLOGY—A NATIONAL MEDICAL LIBRARY.

Dr. George Sutton, Ind., Chairman of the Special Committee on Comparative Pathology, and the Effects which Diseases of Inferior Animals have upon the Human System, presented his Report speaking of the difficulty in gaining access to the requisite material for preparing a proper report on the subject; and of the urgent need of a National Medical Library.

Dr. J. J. Woodward, Surgeon-General's Office, U. S. A., stated that the National Medical Library, which the last speaker considered so desirable, was already in existence. The library of the Surgeon-General's office, at Washington, now contained some eighteen thousand volumes, and probably the most complete collection of American medical journals and pamphlets anywhere to be found. Its catalogue of titles, nearly ready, filled about four hundred double-column imperial octavo pages. Congress had been liberal toward it for the last few years, and there was every prospect it would continue its favor. Gentlemen interested might communicate with Mr. Billings at the Surgeon-General's office, who was anxious to complete the stock of journals, monographs, etc.

On information from the Secretary, that papers referred to the Publication Committee must be printed unchanged, the Report was referred back to its author for revision of the portion concerning a National Library.

COMMITTEE ON EDUCATION.

Dr. Pollock, Pa., moved that a special committee of seven be appointed by the Chair, to consider the suggestions of the Report on Medical Education. Carried. The Chair subsequently named Drs. Pollock, Pa.; Westmoreland, Ga.; Talley, S. C.; Walker, N. Y.; J. D. Jackson, Ky.; Weatherly, Ala.; and Hunter McGuire, Va.

WHO SHALL DECIDE ON THE PUBLICATION OF MANUSCRIPTS?

Dr. Stetler, Pa., offered the following:

Resolved, By the American Medical Association, that no report or paper which is referred by it to the various Sections shall be referred by the latter to the Committee of Publication without first having been examined and approved by two-thirds of the members present at said Section.

Dr. Gordon, Me., thought the Committee on Publication should decide on the merits of papers, and that, to this end, it should be made large enough, and be composed of men eminent enough in culture and experience to command respect for its decisions.

Dr. Keller, Ky., moved as an amendment to Dr. Stetler's resolution the following substitute:

Resolved, That the Committee on Publication have discretionary power on all subjects referred to them, unless instructions to publish accompany the reference.

Dr. Porter, Del., endorsed the original resolution except that he would require the approval of two-thirds of all the members of the Section, as that would probably secure better attendance. The Sections should feel the responsibility devolving upon them; and he was opposed to leaving the discretionary power with so small a number as the Publication Committee.

Dr. F. G. Smith thought this resolution conflicted with the Constitution and should lie over for one year.

Dr. Williams, of Baltimore, contended that there was now no question which could come up requiring a two-thirds vote, and he did not see that it was necessary in this case. He moved that the resolution lie on the table. Lost by affirmative, 104; negative, 165.

Dr. A. B. Palmer, Mich., said it would be impossible for the Publication Committee to examine and decide upon all the matters submitted to them, and were it possible, they would be unwilling to take the responsibility. This should be left with the Association and its Sections, where it had remained for twenty years, in spite of various schemes to change it. He moved indefinite postponement.

Dr. Bronson, Mass., seconded the motion, and amplified upon the argument, of Dr. Palmer.

The motion was declared carried; the note doubted, and a division called for; pending which the meeting adjourned.

Wednesday Evening.

LECTURES AND ENTERTAINMENTS.

At seven o'clock Prof. H. D. Noyes, M.D., of New York, delivered, at the Chemical Lecture Room of the University of Pennsylvania, a highly interesting lecture on *The Relation of Diseases of the Inner Structures of the Eye to other Affections of the Body.* It was profusely illustrated by magic lantern projections of physiological and morbid ophthalmoscopic appearances from a series of slides, exquisitely painted, under the Doctor's own supervision.

At eight o'clock, Prof. Robert E. Rogers, M.D., gave, in the same building, a brilliant lecture, of an elementary character, on some *Optical and Electrical Phenomena.* He explained concisely the wave theory of light, and that there are not three or seven primary colors, but as many as there are different wave-lengths; dwelt upon the spectrum analysis with demonstrations; showed how to generate "electricity for the million" by the friction of high-pressure steam escaping through wood-lined nozzles; and otherwise filled up the hour to the manifest enjoyment of a crowded audience.

Later, the delegates, with the ladies who accompanied them, were hospitably entertained at the residences of Dr. Wm. H. Pancoast and Dr. Hugh L. Hodge.

Third day, Thursday, 9th May.

Met in the church, and called to order by the President, at 10 A. M.

MEMBERS BY INVITATION.

Upon motion, Drs. E. N. Asch, N. C., W. W. Vinnedge, Ind., S. T. Maxwell, Fla., and John Berryman, of Edinburgh, were invited to seats on the floor as members of the Association.

SAFE POISON-BOTTLES.

The Secretary read the following, which had been adopted by the College of Physicians, Philadelphia, May 1, 1872.

Whereas, cases of accidental poisoning and of the internal administration of medicines intended only for external use are so frequent; and

Whereas, every possible safeguard should be employed to prevent such accidents; therefore

Resolved, That it is recommended to all druggists to place all external remedies in bottles not only colored, so as to appeal to the eye, but also rough upon one side, so that by the sense of touch no mistakes shall be possible even in the dark; and that all bottles containing poisons should not only be labelled "poison," but also with another label indicating the most efficient and convenient antidote.

Upon motion of Dr. Sayre, N. Y., adopted.

DISEASES OF ANIMALS.

Dr. Alexander W. Stein, of New York, presented the following:

Whereas, it has long been recognized that diseases of a dangerous and fatal nature are transmissible from animals to man, and that certain zymotic affections, which are common to both man and animals, do very frequently manifest themselves, first in the latter and subsequently in man, thus warning us that to be indifferent to the condition of the inferior animals is to introduce and create centres of disease among ourselves; therefore,

Resolved, That a committee be appointed to ascertain what measures can be instituted to prevent the extension of such diseases to man, and what sanitary measures can be effected to arrest the progress of such diseases in animals, the committee to report next year.

Adopted. The Chair appointed Drs. Stein, N. Y.; Sutton, Ind.; and Gross, Phila.

ALCOHOL.

Dr. Frederick Hornor, Va., proposed the following:

Whereas, the abuse of ardent spirits in our country has proved injurious to the health of the community,

Resolved, That the members of this Association are recommended to discourage the use of alcoholic stimuli in their practice.

Adopted.

Dr. Walker, N. Y., presented a resolution that so much of the report of the Committee on Literature as relates to the establishment of a national medical journal be referred to a committee, to report at the present session.

Agreed to.

REPORT ON NOMENCLATURE OF DISEASES.

Dr. Francis G. Smith, Phila., Chairman of the Committee on Nomenclature of Diseases, reported that in accordance with instructions given them by the Association in 1870, they had prepared a nomenclature to be adopted and observed by the practitioners of the United States. The system presented was based upon that of the Royal College of Physicians of London, with such additions and modifications as in the judgment of the committee were needed. In selecting Latin equivalents they had frequently departed from the British nomenclature, and so far as possible the English rather than the Latin terms had been employed.

To the Report were appended the following:

Resolved, That the Report of the Committee on Nomenclature of Diseases be referred to a special committee of five members, to be appointed by the President, who shall examine it and report upon its final disposition at the present meeting of the Association.

Resolved, That on the favorable report of said Committee it shall be referred back to the Committee on Nomenclature for a preparation of an index.

A MINORITY REPORT.

Dr. Woodward, U. S. A., offered a minority report, that while the minority of the Committee had the highest respect for the ability and learning of those members of it whose residence in Philadelphia had enabled them to attend to its meetings and aid in the production of the report just read, they nevertheless felt it a duty to express their earnest conviction that the adoption of a nomenclature and a classification by this Association was a matter of too great importance to be acted upon hastily, and before any of the members of the Association, except a part of the Committee, had had any opportunity to examine for themselves the scheme proposed. The minority of the committee had not been able to examine the proof-sheets of the work until the commencement of the present meeting, although this was due to circumstances, and not the fault of the majority. They proposed, therefore, this resolution:

Resolved, That the nomenclature and classification just submitted by the Committee be published in the transactions; that one thousand extra copies be printed in cheap pamphlet form and distributed to the profession; and that the question of the adoption of the nomenclature and classification by this body be postponed until the next annual meeting.

These reports were discussed by Drs. F. G. Smith, Woodward, Hamilton, White, Howard, Gallagher, Newman, Palmer, J. L. Atlee, and Squibb. Dr. Woodward's resolution was then accepted.

AN EDUCATIONAL CONGRESS.

Dr. Keller, Ky., presented the following:

Resolved, That so much of the Report of the Committee on Education as refers to the establishment of a medical congress, consisting of an equal number of representatives from each State, is of immediate importance, and, in order to further the views thus expressed, that a committee of one from each State be appointed at once to take the preliminary steps necessary to organization, with instructions to report before the adjournment of this Association.

Lost.

OFFICERS NOMINATED AND ELECTED.

Dr. Wm. O. Baldwin, Ala., Chairman, read a partial Report from the Committee on Nominations, as follows:

President.—Dr. Thomas M. Logan, Cal.
First Vice-President.—Dr. Catlin, Conn.
Second Vice-President.—Dr. McPheeters, Mo.
Third Vice-President.—Dr. Pollock, Pa.
Fourth Vice-President.—Dr. Briggs, Tenn.
Treasurer.—Dr. Caspar Wister, Pa.
Librarian.—Dr. William Lee, D. C.
Committee on Library.—Dr. J. M. Toner, D. C.
Next Place of Meeting.—St. Louis.
Assistant Secretary.—Dr. M. A. Pallen, Mo.

The report, as far as read, was received and adopted, and the committee continued.

Dr. Pallen, of St. Louis, in behalf of the Profession in his city and State, thanked the members of the Association for their selection of the place of meeting, and promised to entertain them in true Western style.

A NATIONAL ACADEMY.

Dr. Pallen, Mo., now offered a series of resolutions looking to the establishment of a national medical academy, for the purpose of examining physicians, and giving them certificates of membership and proficiency; and appointing a committee to carry out the scheme, with its originator, Dr. Gratz Moses, of St. Louis, as Chairman. Not agreed to.

A NATIONAL HEALTH COUNCIL.

Dr. T. M. Logan, Cal., Chairman of the Special Committee on a National Health Council, read a long Report, stating that he had opened communications with each of the thirty members of the Committee, representing as many States, and had prepared and circulated a form of memorial with a view of bringing about a concerted movement for harmonious action on the part of the several State Legislatures. Though no definite results had yet been reached, still a general interest had been awakened.

"We may safely measure the real rank which a state holds in the scale of civilization by the attention it bestows on public hygiene. . . . . No amount of individual effort or of medical skill can do what is wanted in the premises. Earnest combined action, not only in, but out of the profession also, is what is wanted to secure to the great masses of the people the first conditions of a sound sanitary state; to arrest the propagation of infectious disorders; to prevent over-crowding in dwelling-houses, and overtasking in schools and manufactories; to furnish an adequate supply of fresh air and potable water, and otherwise to provide against the new dangers to health and to life which the progress of population, consequent upon the increase of wealth, is continually introducing. Without extrinsic aid, however, it is believed that we can effect comparatively but little. The influence and moral power even of medical men are limited, and it is in fact impossible for those in large practice, with all the anxieties which such practice necessarily entails, to give to questions of a public nature the time and consideration their importance demands. What seems to be required, therefore, to meet the necessities of the case, is a thoroughly well organized department of health, connected with government, under the surveillance of this Association, and charged with the duty of superintending a sanitary system, to which our municipal and State boards of health shall be subsidiary, just as our County and State societies are to this organization.

"Through the instrumentality of such State boards of health as are now inaugurated in Massachusetts, California, Minnesota, and Virginia, a body of medical men will be provided for, who will thus be enabled to withdraw from the engrossing demands of private practice, and to devote themselves to the special study of sanitary questions; and in order to secure a constant supply of competent physicians to this end, there should be instituted in our medical schools full and complete courses of instruction in State Medicine.

"As the phrase 'State Medicine' is perhaps imperfectly understood by many of the profession, and is absolutely new to the general public, we would here, parenthetically, to give an idea of what it is, quote the list of subjects which have been suggested as properly appertaining to it by a committee of the General Medical Council of Great Britain. They are: Forensic Medicine, Toxicology, Morbid Anatomy, Psychological Medicine, Laws of Evidence, Preventive Medicine, Vital and Sanitary Statistics, Medical Topography and certain portions of Engineering Science and Practice. In short, as a member of the committee well expresses it, State Medicine consists in the application of medical knowledge and skill to the benefit of communities, which is obviously a very different thing from their application to the benefit of individuals in private or curative medicine.

"The course of lectures to which we have just referred might be open for the instruction of the public generally, and particularly school teachers, trained nurses, and sanitary inspectors."

"Diffuse the discovery of the means of protection against many diseases, which have been perfected under the vigilant outlook and investigation of combined chemical and microscopic detectives; extend what has been successfully applied to circumscribed communities, to states, and to nations; let facilities for concerted action be established internationally through the instrumentality of governments——and the people will no more be decimated by those pandemic waves which have so often swept with cumulative impetuosity over the face of the earth. Let the operations of the 'Signal Service' be so extended to both continents as to report everything of scientific interest to the physician as well as to the physicist, and the important results that will follow cannot be conceived in their illimitable applications. 'Not only will storm-currents be indicated hours, if not days, advance of their actual presence, but all the meteoric and other phenomena attendant upon the appearance of diseases will be noted and heralded, so that the progress of the latter may be combated in their small beginnings, before they gain a foothold in the land. Thus, while from the concomitant observations of an expanded horizon the origin and advance of epidemics will be made more apparent than they now are, so will their latent relationship to some great cosmic or telluric laws be probably discovered.' . . . . . .

"In conclusion, your Committee respectfully ask to be continued, and constituted a special Section of 'State Medicine and Public Hygiene,' to which all

subjects cognate thereto may be referred. Also, that they be empowered to take such action, in connection with the authorities at Washington, as in their judgment may be deemed expedient in carrying out the objects of the resolutions."

Dr. J. C. Tucker, Cal., offered, as a substitute for the suggestions in the report, a resolution appealing to Congress to establish a national Sanitary Bureau, in charge of three Commissioners, at a salary of $5,000 each, to be appointed by the United States Treasurer, from physicians nominated by this Association. The Bureau was to have charge of all governmental hospitals, and was to secure the proper supply of bovine virus, besides performing many other national duties. The plan of Dr. Tucker was very elaborate, and contained an act bearing upon this subject to be presented to Congress.

Dr. Gallagher moved that the resolution lie on the table. Agreed to.

Dr. Tyler, of Washington, D. C., insisted upon the members' exercising great care in submitting questions to Congress; that all such matters were likely to be controlled by rings for their own advantage.

That portion of the Report of the Committee, which referred to taking action in connection with the authorities in Washington, was stricken out, and the Report was then agreed to.

THOSE POOR MSS. AGAIN.

Dr. Talley, S. C., wished to call up the business cut off by adjournment yesterday. At that moment there was pending a division of the House on the motion to indefinitely postpone Dr. Stetler's resolution, to which an amendment, in the nature of a substitute, had been offered by Dr. Keller. The Chair decided that the business could be called up, and it was so ordered. Dr. Talley then re-opened the argument, anxious that some plan might be carried through to make the *Transactions* respectable, whether that of the original motion, that of the pending amendment, or something better than either.

Dr. Keller, by request, repeated his amendment in substance as yesterday, though in form somewhat modified. At this point the Nominating Committee made a supplementary report, which was acted on; but for the sake of our readers we reserve it a moment. That disposed of, Dr. Keller, stating his motion for the fourth time, and reducing it to writing, got it finally in this shape:

Resolved, That all papers referred to the Committee on Publication by this Association, or by one of its Sections, may be published at the discretion of that Committee, provided that no paper shall be referred by the Section without having been previously read and approved by a two-thirds majority of the Section present.

Drs. Wister, Keller, N. S. Davis, Sayre, E. L. Howard, Gross, and Porter followed in animated debate, with reiteration, reminiscence, and reference to the Constitution. At last a (new) motion to indefinitely postpone overwhelmingly prevailed.

NOMINATIONS AND ELECTIONS CONCLUDED.

The Committee on Nominations presented in two installments the balance of its Report, as follows:

STANDING COMMITTEES.

Committee of Arrangements: J. B. Johnston, J. T. Hodgen, J. P. Moore, Robinson, Kennard, Leete, Brokaw, J. M. Scott, all of St. Louis, Mo.

Committee on Publication: Atkinson, Pa., Chairman; D. Murray Cheston, Pa.; William Lee, D. C.; Caspar Wister, Pa.; H. F. Askew, Del.; J. Aitken Meigs, Pa.

Committee on Prize Essays: Jno P. Moore, Mo.; Chairman; E. P. Gregory, Mo.; N. S. Davis, Ill.; T. Parvin, Ind.; G. Mendenhall, O.

Committee on Med. Education: William Carson, O., Chairman; Joseph P. Logan, Ga.; E. Lloyd Howard, Md.; H. K. Steele, Cal.; S. Oakley Vanderpoel, N. Y.

Committee on Med. Literature: Austin Flint, N. Y., Chairman; L. P. Yandell, Sr., Ky.; Henderson, Ala.; S. B. Thrall, Iowa; Seavey, Me.

Committee on American Med. Necrology. [One member from each state and territory; names omitted from lack of space.]

Committee on Climatology and Epidemic Diseases. [Similarly constituted.]

OFFICERS OF SECTIONS.

Chemistry and Materia Medica: R. E. Rogers, Phila., Pa., Chairman; E. Cutter, Woburn, Mass., Secretary.

Practical Med. and Obstetrics: D. A. O'Donnell, Balt., Md., Chairman; B. F. Dawson, N. Y. City, Secretary.

Surgery and Anatomy: Warren, Balt., Md., Chairman; W. F. Peck, Davenport, Iowa, Secretary.

Meteorology, Medical Topography and Epidemic Diseases: George Sutton, Aurora, Ind., Chairman; *Elisha* Harris, N. Y. City, Secretary.

Med. Jurisprudence, Hygiene, and Physiol.: S. C. Busey, Wash., D. C., Chairman; A. B. Arnold, Balt., Md., Secretary.

Psychology: Isaac Ray, Phila., Pa., Chairman; John Curwen, Harrisburg, Pa., Secretary.

SPECIAL COMMITTEES.

On Vaccination: Wise, Ky.

On Diseases of Colorado: Elsner, Col.

On Treatment of Fractures: L. A. Sayre, N. Y.

On "Chua Bibberina" (!)—a substitute for quinia: Wm. Chew Van Bibber, Md.

On Gynæcology: M. A. Pallen, Mo.

The Report was received and, on motion, adopted, thus completing the election of officers.

REPORT ON ETHICS.

Dr. Askew, Del., Chairman of the Committee on Ethics, presented its Report, which was read by Dr. N. S. Davis. The report, referring to several disconnected matters, was considered by sections as follows:

THE MASSACHUSETTS MEDICAL SOCIETY.

The preamble and resolutions offered on Wednesday by Dr. Davis were recommended for unanimous adoption by the Association. They were again read in these words (a slight alteration in Committee having relieved them of their obscurity of expression on one point):

Whereas, It has been represented that the Massachusetts Medical Society considers that its delegates to the annual meeting of the American Medical Association in Washington, May, 1870, were unjustly excluded by the Committee of Arrangements; and

Whereas, The action of the Committee on Ethics, at the same meeting, in refusing the right of said Committee of Arrangements to exclude the Massachusetts delegation, is not yet fully understood by that society; therefore

Resolved, That the Association acknowledge the great and effective efforts of the Massachusetts Medical Society to elevate the profession, and to suppress quackery of all sorts, and especially assure that society of encouragement and support in its present exertions to rid itself of all pretenders.

Adopted unanimously.

Dr. Bronson, of Massachusetts, in behalf of the society concerned, thanked the Association for its hearty vote.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

In regard to the official communication of the Corresponding Secretary of the Medical Society of the District of Columbia, certifying that Drs. Bowen, Bond, Williams, Crouse, Phillips, and others have forfeited their membership in that society by reason of not having paid their dues for three years, and after repeated notice of the fact and its consequences, the Committee recommend that their names be stricken from the roll of membership; and also the same action in regard to Dr. D. W. Bliss, who is under sentence of expulsion from that society.

Adopted unanimously.

ALUMNI ASSOCIATIONS.

In regard to alumni associations of medical colleges, the committee reported that it did not consider them such medical societies as were intended by the constitution to be eligible to membership, and hence they recommended that no delegates be received from any of the alumni associations of any of the medical colleges from any part of the country.

Adopted unanimously.

PATHOLOGICAL SOCIETY OF BERKS CO., PA.

In regard to the Pathological Society of Berks Co., Pa., the registration of whose delegates had been postponed on account of the protest alleging the want of good standing on the part of that Society, the Committee had postponed action for the want of proper evidence, and asked further time.

Granted.

THE EXCLUDED WASHINGTON DELEGATES.

In regard to the Academy of Medicine of Washington, D. C.; the Freedman's Hospital, of the District of Columbia, and the Howard University, of Washington, D. C., the registration of whose delegates had been postponed by the Committee of Arrangements on account of want of good standing on the part of those institutions, as indicated by the action of this Association in 1870 and 1871, the Committee report the facts as follows: First. That this Association, at its meeting in San Francisco in 1871, by the emphatic vote of 83 to 26, refused to so amend the constitution as to admit delegates from colleges in which women are taught and graduated in medicine; and from hospitals, in which women graduates in medicine, attend. Second. That this Association, in 1870, declared, by an almost equally emphatic vote, that a medical society constituted in part by members who were not licensed to practice in accordance with the civil law governing such cases in certain States, is not entitled to representation in this Association. Third. That sections 3, 4, and 5 of the Act of Congress, passed July, 1838, incorporating the Medical Society of the District of Columbia, and which has been the law regulating the practice of medicine in that District up to the present time, requires (*sic*) all persons coming into the District to practice medicine, to apply for, and within six months obtain, a license to practice from the Board of Examiners; and to effect that purpose makes it a misdemeanor, accompanied by a fine of $50, to practice without such license. Fourth. That it has been proven by the testimony of several witnesses, that the medical society of the Academy of Medicine of Washington, now contains in full fellowship at least four or five members who have never applied for and obtained licenses to practice, and yet are actually practising medicine, and three of whom are on the list of delegates sent by that society to this Association; also, that one of them is a member of the medical staff of the Freedman's Hospital; and also, that several of the Faculty of the Howard University are members of the same Academy of Medicine, and one of the teachers is a woman.

In view of these facts, the Committee cannot regard either of the three institutions named as in good standing, whether tested by civil law, by the former decisions of this Association, or by its Code of Ethics, and hence the Committee recommend that the delegates from those several institutions be not admitted into this body.

Dr. Robert Reyburn, of Washington. D. C. (Prof. of Surgery in the Medical Department of Howard University, Delegate from that institution, Surgeon to the Freedman's Hospital, Member of the National Academy of Medicine of Washington, and Permanent Member of the American Medical Association), obtained the floor, but granted Dr. Davis permission to read the next and final section of the Report, which referred to the resolution of Dr. Findley, offered Wednesday, asking a clear interpretation of what was already one of the ordinances of the Association.

CONTRACT DOCTORS.

The Committee offered the following:

Resolved, That members of the profession hired by the month or year for definite wages, by families, railroads, manufacturing incorporations, or any money-making institution whatever, for ordinary surgical or medical practice, always excepting eleemosynary and charitable institutions and hospitals, are to be classed as irregular practitioners, and, therefore, disqualified for membership in this Association, or in State or County societies.

Dr. J. L Atlee wished to know whether it was irregular to attend state prisons and county jails for a stipulated salary.

Dr. Weatherly moved to refer the question back to the State societies. Agreed to.

THE WASHINGTON DELEGATES' CASE RESUMED.

The preceding section of the Report being again before the house,

Dr. Reyburn said the question was one of the most important which had ever come before this body, involving, as it did, not only the rights of a few persons, but principles vital to the welfare of the Association, perhaps to its very existence. As the licensing system which had been referred to was peculiar to the District of Columbia, he would devote a word to it. There was there a medical body whose charter empowered it to license every physician practising in the District, and to exact a fee of ten dollars for the certificate of license. The fee went into the private treasury of the society. Under this charter it had granted licenses to irregular, homœopathic practitioners.

Dr. Tyler, of Washington.—To whom? Name one.

Dr. Reyburn.—It is a matter they admit. I have my information directly from the Censors themselves, who say they are compelled to give licenses to every practitioner, however irregular, who presents the diploma of a recognized school. If the licensing power of that Society were any protection to the profession or the public against quackery, we should be in favor of it.

He would say further, that the District Society had never been willing to test the legality of its power to require a license of practitioners by inflicting any fine

for non-compliance. It was admitted by all lawyers that this provision of the charter was illegal. Justice Carter, in the course of a decision, had stated that Congress had no right to empower any person to take a license fee such as the Society exacted, or to empower one person to decide upon the right of another to practice in the District. To be candid, however, the speaker must say that this opinion of the Chief Justice was not judicially given. This point did not come properly before the court, the case under consideration being disposed of on other and technical grounds.

It was with regret that the speaker found this question brought up today. He had hoped and thought the enmity of two years ago was buried, and with his colleagues he had come here in full faith that there would be no opposition to their admission. Indeed, he had been assured of this by prominent members. What was the offence? In the case of Howard University, that institution admitted all who applied for a medical education, without distinction of color or sex. If the Association, in its wisdom, saw fit to declare that institutions thus liberally constituted should not be represented, it had of course the power to do so. But, before committing themselves on this question, he hoped the members would think what they were doing. The Medical Department of Harvard University had lately graduated a colored student, and Harvard today received women. He hoped the Association, if it voted at all would vote understandingly. He wished to ask the medical profession of this country, seeing before him as he did, representatives of the highest talent and dignity: Would they commit themselves before the world to the idea that we must allow only a certain class to enter our medical schools? We might have an opinion, as individuals, that it is not right for women or colored men to study medicine, but had we the right to exclude them? For himself, he believed every human being was entitled to do the highest work of which God had made him capable.

With regard to the Academy of Medicine, he would state in a word why it was founded. It was an association of medical men for the discussion of medical topics, and was established for the simple reason that they who had belonged to the old Society of the District had grown tired of a yoke which they had borne until it galled their very souls. They were tired of being compelled to associate with a medical aristocracy, such as existed nowhere else. Could that society not only exclude them from its own membership, but prevent their forming other associations? He could not think that the Associaton would stultify the record of the profession by endorsing anything of the kind. All the members of the Academy of Medicine had subscribed to the Code of Ethics of this Association, and there were no irregular practitioners among them. All of them, as he believed, were fully entitled to representation in this body.

For himself he believed every one who knew him would testify that he had endeavored to live faithfully by the Code of Ethics, and it would be an unparalleled proceeding if the Association should confirm the Report just read, and virtually declare that every medical practitioner of the District must belong to *the* Medical Society of the District of Columbia before he could practice there, or be admitted here.

With reference to the Howard Hospital, the members of the staff were all regular graduates of good standing. The colored physician there was a graduate of the college in Cleveland, Ohio.

The real question underlying all this trouble was the old, inevitable one, which, like Banquo's ghost, would not "down." Every one in the District knew that but for this color question there would have been no dispute.

Dr. J. J. Woodward, U. S. A., of Washington, D. C., would ask the Chairman of the Committee on Ethics to state whether, as he had inferred from its Report, the ground of exclusion of the delegates from the Howard University and the Freedman's Hospital was simply that these institutions admitted women and colored men, or whether there was some other reason. (The question was not answered.)

Dr. S. C. Busey, of Washington, would not have indulged in any speech on this occasion if Dr. Reyburn had not assailed the Medical Society to which he had the honor to belong. The first charge was that the Society licensed irregular practitioners. If the gentlemen would consult the law of Congress which prescribed that that Society should issue a license to every man who presented a diploma from a chartered institution, or passed successfully the Society's Board of Examiners, they would discover that it had no right to withhold its license, though the applicant were proved irregular. Possibly certificates had been granted to homœopaths, but in that case the diploma of a regularly chartered school of this country had been authority for it. Certainly no homœopath had ever gained a license from the certificate of the Examining Board. He would ask Dr. Reyburn whether he was not himself a member of the Department of Hygiene and Physiology in the Institution (?) of Science and Arts.

Dr. Reyburn explained that he had been elected to to that Department, but that when he had discovered the character of its organization he had refused to accept. He was in hearty accord with the opinions of the last speaker upon that institution.

Dr. Busey.—I ask if Dr. Palmer was not sent here as a delegate from that body?

Dr. G. S. Palmer, of Washington, D. C. (Physician to Freedman's Hospital, and Delegate from the same, Prof. of Physiology and Hygiene Med. Dep't Howard University; Member of National Academy of Medicine, Permanent Member of the Am. Med. Association).—I acknowledge that I was, but I would simply state that that is chartered by Congress as a purely scientific body, and as such it has been decided that it has no right to representation here. I have presented no credentials, and I think no one else has presented any from that body. With that question, therefore, we have nothing to do. With regard to the Howard University I hope to be heard by and by.

Dr. Busey.—The only point I wished to make has been established by their own confession. I simply desired to show you that here were two professors in Howard University, who were members of a society that admits homœopaths; and I brought up the point merely as an offset to the charge madea gainst my own Society, which has never admitted a homœopath.

The second charge is, that my Society exacts a fee for a license, and devotes the fee to its private purposes. Now that fee in part goes to pay the expenses of the Society, but mainly to supply the gentlemen and others with their certificate or diploma. I venture to assert that on the Treasurer's books, from the time the Society was organized in 1819, there is not charged a single cent applied to any other than legitimate purposes.

The next charge is that the profession in Washington maintains a sort of aristocracy. I do not know what test of aristocracy the gentleman would apply—birth, wealth, race, or whatever; but I can tell him that his three colored friends have all been licensed without a single negative vote. That was the law. They presented

diplomas from regular medical schools. True, we objected to receiving them as members of our Society, and that we had a perfect right to do.

Again, the gentleman maintains that our action is equivalent to claiming the right to prevent the formation of other medical Societies. Our Society claims no such right, and prescribes no such thing. It does not interfere with the formation of other Societies, but it does say that no such Society shall come here through its representatives, unless its members have first complied with the law of the land. Now what is the condition of the Academy of Medicine? It applies for admission here when, by their own confession, some of its members have not complied with the law, and are not licentiates of the Medical Society of the District of Columbia. The question of constitutionality is not one for us to pass upon; it is a question for the Courts. The principle of ethics this body has already once enforced. Will you yield it now? You decided in 1870 that any society, to be entitled to representation in this body, must first have complied with the law regulating medical practice in its own locality. This is a very important question. Many of the men who were excluded in 1870 by this decision have since bowed to it and complied with the law. The National Medical Society, the organization to which we then objected, died. But many of its members, together with other practitioners, organized what is now called the Academy of Medicine, and this Academy has pursued the same course with its predecessor, only to a less extent.

. . . . . .

The gentleman says that our Society has never maintained its right of license before the courts. We prefer to bring our questions to you, whom we feel to be more competent to decide them. But the Society has contested the issue before the courts of the United States, and it has as yet triumphed in every instance.

At the conclusion of this address, a great deal of confusion was occasioned by cries of "question," and by hisses from those who were anxious to vote without further discussion.

Dr. Bronson, Mass., moved that when the meeting adjourn it be to an early hour this evening, and that this matter be made the special order.

Dr. Palmer.—I will endeavor to explain, as briefly as possible, the position held by Howard University, and my own position as a professor in that institution. I have been assailed as not conforming to the regulations of the Medical Society of the district of Columbia. It is said that I am practising medicine in Washington while I am not a licentiate of that Society. It is true that I am not a licentiate of that Society, and that I have never applied for a license. But I have never practised medicine in the District in the ordinary acceptation of that term. I have never put out my sign; have never issued a card; have never offered to charge a fee, or anything of the kind. I have gone there solely for the purpose of performing my duties as Professor of Physiology and Hygiene. The only practice I have engaged in there has been in my own family, and among some of my friends. Had I intended to practice medicine in the District, I should, as a good and obedient citizen, at once have applied for a license to the District Society. And if I ever make up my mind to practice there I shall certainly comply with the law. I have been a practitioner for twenty years, and have always endeavored to sustain the laws of the land, and to abide by the Code of Ethics.

Now as to Howard University: In 1866 Congress chartered that institution, endowing it with all the rights and privileges of the most favored university in the country. It has organized under its charter a department of Law, of Theology, of General Science and Literature, and of Medicine. All these are in a flourishing condition. They are graduating legal gentlemen, admitted to the bar all over the country. The Medical Department, which especially concerns us, was organized by electing professors to all seven of the chairs recognized by this Association. Two of them were from without the District; the other five practise within the District limits, and are all licentiates of the District Society. This Faculty has gone on with the Code of Ethics of this Association before it; and whenever a disputed point has come up, over which it had any control, it has abided by that code. It is composed of gentlemen, all of high standing, and had any error possibly been committed, it would have been an error not of intention but of oversight. But there has been no error. We have been scrupulously right, and we wish that understood. We are charged in this report of your committee with admitting females as students, and with having a female teacher in our Faculty. That is not strictly correct: the lady referred to is not a member of the Faculty, but is a special instructor in Opthalmology. She is a lady distinguished for her ability both as a lecturer and as an operator, and has gained the highest recognition from the professors in Vienna, where she has been engaged in study that would do credit to any of us. The only question which concerns us here is whether we are to prevent ladies from studying and teaching. That is a question which underlies this whole matter, as well as the color question.

I have a personal statement to make. When I presented myself here as a Permanent Member I was told by the Secretary that I could not be registered as such. Now I have been a member of this Association for fifteen years, and the rule has always been, that a permanent member may register, and be admitted to the floor, and that if any question comes up with regard to him he may defend himself. I was not so admitted. I then saw the Committee of Arrangements, who denied my application and referred me to the Committee on Ethics. This last Committee said that they had no charges against me, but still I was not permitted to register. And only late on the second day did I receive the permission to do so from the Chairman of the Committee of Arrangements, after, as I understood, charges had been preferred against me. Now I am not aware that I have ever done anything in conflict with the Code of Ethics of this Association, unless it be to have accepted a position as Professor of Physiology and Hygiene in an institution which admits colored persons and ladies as students.

Dr. E. Hartshorne.—I wish to set this Association right with regard to a charge made by Drs. Reyburn and Palmer against the Committee of Arrangements. Dr. Reyburn stated that he came here with no warning that these cases had been suspended and referred to the Committee on Ethics. I will tell him that he was warned, and he knows he was warned, and a gentleman sitting near me knows he was warned. The Committee of Arrangements, as soon as they had determined upon the case, proposed that these gentlemen should be informed of the prospect before them, and it was at first decided to send them an official notification; but it was thought afterwards that such a course might be deemed officious. As a private individual, however, I sent a notice to Dr. Reyburn; he received my note; and I have in my possession his note acknowledging its reception.

Dr. Reyburn explained that he had certainly received Dr. Hartshorne's letter, but it came after most

of the delegates accredited to the Association had left the city.

The previous question was here moved, and, after no little confusion, Dr. S. D. Gross insisted upon its being put.

Dr. Bronson moved an adjournment, which was not heard by the Chair.

The motion for the previous question was carried.

Dr. A. B. Palmer.—Before the previous question is put—

The Chair.—The previous question has been voted. The question is on the adoption of the Report of the Committee on Ethics.

The Report was adopted.

Adjourned.

Thursday Evening.

LECTURE AND ENTERTAINMENT.

At seven o'clock Prof. J. Solis Cohen, M.D., of Phila., gave an interesting lecture on *Sound* at the Jefferson Medical College, illustrated by Helmholtz's improved siren, sensitive flames, sensitive water-jets, etc.

Thomas A. Scott, Esq., gave the Association a sumptuous entertainment at his residence.

Fourth Day, Friday, 10th May.

The meeting was called to order by the President at 10 o'clock.

OBITUARY.

Dr. A. B. Palmer, Mich., offered the following resolutions on the death of Dr. Zena Pitcher.

Whereas, It has pleased the great Ruler of the universe to take from us our former President, Dr. Zena Pitcher, of Detroit, a man of large attainments, of unspotted character, of great benevolence, and of unusual devotion to the profession of his choice, therefore

Resolved, That in the death of Dr. Pitcher the profession has lost one of its purest members, the community one of its greatest benefactors, and this Association, one of its most dignified and genial members.

Resolved, That we mingle our sympathies with the family, and the immediate friends of the deceased, and that a copy of these resolutions be transmitted by the President of the Association to the bereaved family.

Adopted.

U. S. MARINE HOSPITAL SERVICE.

Dr. Peter Pineo, Mass., presented the following, through Dr. Crampton, Ala.:

Resolved, That the U. S. Marine Hospital Service be placed in the same relative position in the American Medical Association with the Medical Department of the U. S. Army and Navy. And that in paragraph II. of Section II. of the Constitution, after the words "Army and Navy" the words "and the U. S. Marine Hospital Service" be inserted. Also, that in Section VI. of the By-Laws, after the words "the Chief of the Bureaus of the Army and Navy," be inserted the words "and the Supervising Surgeon of the U. S. Marine Hospital Service."

Dr. W. F. Peck objected to the consideration of the resolution at the present time, as it involved an amendment to the constitution, which required a year's notice.

The Chair decided that, as a member objected, it must lie over for one year.

REPORT ON NOMINATIONS.

The Committee on Nominations made a supplementary report which, for convenience, we have embodied in their Report given yesterday.

CONTRACT DOCTORS.

Dr. Stetler, Pa., offered the following:

Whereas, the American Medical Association did refer the whole subject of "contract physicians," after the report of the Committee on Ethics, to the various State Medical Societies, therefore,

Resolved, That everything relating to this subject be rescinded or stricken from the Ordinances of the Association.

Tabled.

PAPERS AND REPORTS REFERRED.

A Report by Dr. C. N. Hewitt, on *The Climatology of Minnesota*, received too late for reference to the proper Section, was referred to the Committee on Publication.

The Minutes of the Section of Chemistry and Materia Medica, recommending one paper for publication, were received, and referred to the Committee on Publication.

The Minutes of the Section of Practical Medicine and Obstetrics, also recommending a single paper for publication, were received and similarly disposed of.

The two papers by Dr. C. F. Perkins, on *Intemperance* and on *Swimming*, were, on recommendation of the Section, referred to their author.

The paper by Dr. Joseph Jones, on *Yellow Fever*, was returned by the Section as too voluminous to be read, and as having been received too late for an abstract to be prepared. On recommendation, voted that it be returned to its author with this explanation. This vote was reconsidered a few minutes later, and

Dr. C. Wister, Philadelphia, moved that the paper be referred to its author with the request that he either present it again in ample time for consideration next year, or present an abridgment.

Dr. Davis, Chicago.—The proper disposition of this subject is one of vital importance to us, and I feel that it lies at the very foundation of the scientific value of the Association. Hence I am anxious to get the Sections to understand what seems to me the only feasible mode of disposing of papers. The true course is to have them referred to a sub-committee of the Section. The author of a paper must, in the first place, inform the Secretary of the Section to which it belongs, thirty days beforehand, that he is going to offer it; then, when the Section comes together, it must take the responsibility of putting the paper in the hands of a committee that will examine it and make the necessary recommendation. If a writer presents a paper large enough for a book, and if it is meritorious, let the Section return it to him with the recommendation that he get it published, with the indorsement of the Association. If the paper is a very short one, and one that would be creditable to a national body, then let the Section refer it back to its author, with the recommendation that he publish it in some medical journal, with the statement that it has been recommended by the Section. We can thus limit our volume to subjects which are either new, or else possess special merits, and then it will be readable and salable.

Dr. Wister's resolution was passed.

SPECIAL COMMITTEES.

The Report of Dr. Lemuel J. Deal, Pa., Chairman of the Special Committee on Cultivation of the Cinchona Tree, was read by Dr. R. E. Rogers, from the Minutes of the Section of Chemistry and Materia Medica. Committee continued.

The Special Committee on the Anatomy and Diseases of the Retina, Dr. R. F. Michel, Ala., Chairman, had no Report.

The Special Committee on Comparative Path lo[illegible]y

etc., Dr. G. Sutton, Chairman, whose Report had been read on Wednesday, was continued, with the privilege of withdrawing the Report.

The Special Committee on the Structure of the White Blood-Corpuscles, Dr. J. G. Richardson, Pa., Chairman, had read its Report before the Section of Medical Jurisprudence, etc., and it was referred to the Committee on Publication.

The Special Committee on Vaccination, Dr. T. N. Wise, Ky., Chairman, had presented no Report for two years, and was discontinued under the rule.

The Special Committee on Skin Transplantation had no Report, its Chairman, Dr. J. F. Thompson, D. C., being absent in Europe. Continued.

The Special Committee on the Nature and Process of Restoration of Bone, Dr. A. L. McArthur, Ill., Chairman, had no Report.

The Special Committee on Some Diseases peculiar to Colorado, Dr. John Elsner, Col., Chairman, had made no Report for two years, but was continued by request.

The Special Committee on Correspondence with State Medical Societies, Dr. N. S. Davis, Ill., Chairman, reported that correspondence had been instituted and was still in progress. Committee continued.

The Special Committee on Contagious Diseases, Dr. M. H. Henry, N. Y., Chairman, had no Report.

The Special Committee appointed to consider the Report of the Committee on Medical Education, Dr. Pollock, Pa., Chairman, was granted leave to report at the meeting next year.

A PROPOSED AMENDMENT.

Dr. S. D. Gross, Phila.—I think, Mr. President, that these Reports on Medical Education might as well be dispensed with. We have had an everlasting repetition of the same thing, *usque ad nauseam*. It comes upon us like an attack of intermittent fever every spring. That we have signally failed to accomplish anything, in spite of our Committees' admirable suggestions, is notorious. Appeals have been made, from time to time, to the Medical Schools of the United States, until at length a Congress was formed and met in Cincinnati in 1867, for the purpose of taking this matter into consideration and reporting at the then approaching meeting of this Association. I had the honor to be a delegate from the Jefferson Medical College to that body. That we had at heart the interests of medical teaching, I need hardly say on this floor. We consumed three days in deliberating on the subject, and finally we agreed to present to this Association a Report, through our Chairman, Dr. Stillé. That Report fell still-born from the hands of the gentlemen who had it in charge. In 1870 the same convention met at Washington, and the only result of the meeting was a severe cold which most of us caught, owing to the imperfect accommodations provided. I consider it idle, therefore, to attempt to legislate upon a matter over which we have not the least power; and I trust we shall hear no more on the subject of medical education.

And I hope the same remedy may be applied to the subject of medical literature. Where is the value of a Report on Literature? What does the American or the foreign press produce that is not known to every intelligent member long before he could gain it from such a report? Its only use is to exhaust our patience and encumber the *Transactions*.

I think much the same thing may be said of the Reports on Climatology and Epidemics. Let us have these reports once in three or in five years if necessary. But by all means let us have each year something fresh to interest and instruct us.

I therefore move as an amendment to the By-Laws, Sect. III., under the head of Standing Committees, that instead of a Report on Medical Education, on Medical Literature, and on Climatology and Epidemic Diseases, there shall annually be delivered before the Association, at its general meetings, an Address in Medicine, an Address in Surgery, and an Address in Midwifery, or the Diseases of Children—the lecturers to be appointed this year by the President, and afterwards by the Committee on Nominations.

The lecturers will have a wide range in the choice of topics, and, if they can find anything fresh to say upon them, they may even embrace literature and education and meteorology.

Dr. N. S. Davis.—I think that special committees on all these subjects would be far better than standing ones. But I cannot agree that all this work of the Association on medical education has fallen still-born on the profession. Instead of that, I think it has resulted in storing up sound educational sentiment all over the land. The seed we have planted is just beginning to germinate. Today, in the eastern section of our country, there is a medical college established upon the very foundation we have been so many years in laying.

Dr. Palmer, of Michigan, moved to lay Dr. Gross' motion on the table. Agreed to.

BETTER MACHINERY.

Dr. E. Lloyd Howard, Maryland, presented a resolution appointing a committee of three, to report, at the next meeting of the Association, a plan for the better arrangement of the Sections, and for the more rigid examination of the papers offered for publication. Agreed to. The President subsequently appointed on the committee, Drs. Howard, Bronson, and R. E. Rogers.

MEDICAL EXPERTS.

A resolution on this subject was read by the Secretary from the Minutes of the Section of Chemistry and Materia Medica, and was adopted by the Association. (See "Meetings of Sections.")

MARINE HOSPITAL SERVICE AGAIN.

Dr. W. F. Peck, Iowa, offered the following, to lie over until next year:

Resolved, That Sect. II. of the Constitution be so amended as to contain the words "Marine Hospital Service" after the words "Army and Navy."

SUNDRY MOTIONS.

Dr. C. Percy LaRoche offered the following:

Resolved, That the American Medical Association invite their medical brethren throughout the civilized world to join them in a Medical Congress to be held in 1876, at such place as may be designated by the Association at its next meeting in St. Louis.

Tabled.

On motion of Dr. Stein, N. Y., the Committee on Renewal of Prescriptions, appointed in 1870, was continued another year.

Dr. P. De Marmon, N. Y., moved that a committee be appointed to report upon the expediency of revising the Code of Ethics.

Tabled.

SALARY FOR THE SECRETARY?

Dr. H. M. Skillman, Ky., offered the following:

Whereas, Dr. Wm. B. Atkinson has served this Association for eight years in the arduous office of Permanent Secretary without any sufficient remuneration; and whereas, his duties must have become more engrossing every year, and their proper performance

must interfere with other more profitable employment, and entail labor upon him well deserving compensation, be it, therefore,

Resolved, That he receives the thanks of the Association for his past services, and that the occupant of the office of Permanent Secretary shall hereafter be paid a salary of one thousand dollars per annum, in quarterly payments.

After a long discussion—embracing much hearty recognition of the faithful services of the Permanent Secretary, and much consideration of the state of the Treasury—on motion of Dr. N. S. Davis, the matter of salary was referred to a Committee of three to report at the next meeting. The Chair appointed, as that Committee, Drs. N. S. Davis, of Chicago; J. P. White, of Buffalo, and E. Hartshorne, of Philadelphia.

Dr. Davis, in view of the present financial prosperity of the Association, moved that, considering the long and faithful services of Dr. Atkinson, the Association cordially vote him a donation of five hundred dollars. For this the following resolution, offered by Dr. Harwood, of New York, was substituted, and passed unanimously:

Resolved, That we return our grateful thanks to our Permanent Secretary for his valuable services, and, as a more permanent testimonial to his merit, we present him the sum of five hundred dollars.

DISCOVERER OF ANÆSTHESIA?

Dr. Henry Hartshorne, Phila., offered the following:

Resolved, That, reaffirming the resolution of 1870, by this Association, recognizing Horace Wells as the discoverer of the practical application of anæsthesia to surgical purposes, we hereby acknowledge the goodwill and sense of justice evinced by Sir James Y. Simpson, and others in England, towards an American discovery, which led to the originating in England of the "Horace Wells Testimonial Fund;" and we cordially recommend a movement in this country having the same object in view.

Dr. H. I. Bowditch, of Boston, moved that the resolution lie on the table, which was agreed to.

A NEW ORDINANCE.

On motion of Dr. N. S. Bolles, Pa., the resolution offered by Dr. Askew, of Delaware, and passed by the Association, to the effect that all questions of a personal character, and credentials of delegates, be referred without debate to the Committee on Ethics, was adopted as a standing ordinance of the Association.

REPORTS OF SECTIONS.

The Section of Practical Medicine and Obstetrics reported its Minutes, which were referred to the Committee on Publication.

A similar Report from the Section of Medical Jurisprudence, Physiology, and Hygiene was similarly referred.

A QUESTION OF ETHICS.

Dr. Parsons, of N. Y., offered the following:

Whereas, Paluel De Marmon has been permitted to register as a Delegate from Westchester County Medical Society, of New York; and

Whereas, He was appointed nearly a year ago, and while he was supposed to be in good standing, but since that time his name has been stricken from the Yonkers Medical Association, he has been refused admission to the New York Academy of Medicine, and charges will be brought against him for unprofessional conduct at the annual meeting of Westchester County Medical Society, therefore,

Resolved, That the name of Paluel De Marmon be expunged from the Register, and that the case be referred to the Committee on Medical Ethics, with instructions to report at the next annual meeting of the Association.

Dr. E. L. Howard, Del., moved to amend the resolution by striking out the provision that the name be expunged, thus simply referring the case to the Committee on Medical Ethics. Amendment adopted and resolution as amended carried.

On motion of Dr. Baldwin:

Resolved, That a Special Committee on the Relations between Physicians and Druggists be established, and that Dr. R. J. O'Sullivan be appointed the Chairman of that Committee, with a request to report at the next meeting.

THAT MEDAL AGAIN!

Dr. Toner, Washington, moved that a committee of three be appointed to consider and report a suitable design for a medal of membership.

Dr. F. G. Smith, Philadelphia, said that there was already in the possession of the Association a pair of dies from which the proposed medal might be struck; and moved that the resolution lie on the table. Carried.

DELEGATES TO BRITISH MEDICAL ASSOCIATION.

The President appointed the following gentlemen as delegates to the British Medical Association for this year: Drs. J. D. Jackson, Ky.; I. R. Bronson, Mass.; Chas. H. Hart, N. Y.; F. Henderson, Ala.; J. F. Johnston, Ala.

THE WOMAN QUESTION.

Dr. Reese, Brooklyn, N. Y., offered the following:

Resolved, That whilst we admit the right of women to acquire a medical education, and to practise medicine and surgery in all their departments, we deem the public association of the sexes in our medical schools, and at the mixed clinics of our hospitals, as impracticable, unnecessary, and derogatory to the instincts of true modesty in either sex.

The resolution was laid on the table by ayes 144, noes not counted; but a few moments later Dr. Busey and Dr. R. E. Rogers expressed a fear that this vote might be misunderstood; it was then reconsidered, when

Dr. Hartshorne moved that the question be indefinitely postponed. Carried.

CARELESS PRESCRIPTIONS.

Dr. I. N. Quimby, N. J., moved the following:

Whereas, Fatal results do sometimes occur from physicians neglecting to write on their prescriptions how the medicines are to be taken, therefore,

Resolved, That the safety of the community requires that in all cases in which active remedies are prescribed for external or internal use, the apothecary to whom the prescription is sent be requested by the prescriber to write legibly on the vial, or other receptacle containing the medicine prescribed, the precise manner of using the same.

On the motion of Dr. Sayre the resolution was laid on the table.

OBITUARY RESOLUTIONS.

The following resolutions were passed at various times during the session of today:

On motion of Dr. H. F. Askew—

Whereas, The removal, in the wisdom of Divine Providence, by death, of Dr. W. W. Gerhard, marks an event of more than ordinary importance; therefore

Resolved, That the combination of high talent with the education in careful observation and close analysis

enjoyed by him before entering upon the study and practice of medicine, and pursued with extraordinary diligence, under the most favorable advantages, in the Hôtel-Dieu, in the clinic of that great master, Baron Louis—perfected him in diagnosis, especially that of the diseases of the heart and lungs, and of typhoid fever. Added to this, his pathological knowledge was so remarkably accurate; and so admirably and successfully were these accomplishments exhibited in the Blockley Hospital—the first field of his labors after his return home—and afterwards in the Pennsylvania Hospital, that they could not fail to imbue his classes with the enthusiasm which manifested itself in his teachings. The profession of that day, without hesitation, accorded him, although a young man, a position *primus inter pares;* and hence his reputation rapidly spread through the country, and brought to him from all sections those who desired his wise judgment on disease.

Resolved, That this Association desires thus to record its high appreciation of the services and character of this lamented member of the profession, and that a copy of these resolutions be transmitted to the family of the deceased.

Dr. Porter, Del., delivered a glowing eulogy upon the subject of the resolutions, and at his suggestion they were adopted by a standing vote.

On motion of Dr. E. Hartshorne—

Resolved, That the honor which has been accorded to the memory of Dr. W. W. Gerhard is eminently due, and is hereby offered, to those of the late Prof. S. Henry Dickson, of Jefferson Medical College, and of the late Prof. Samuel Jackson, of the University of Penn., both of whom are recently deceased. Their names and reputations, like that of Dr. Gerhard, are identified with the history of medicine in America. The American Medical Association owes them a record of grateful recognition, which would be as much an honor to itself as to their memory. Further,

Resolved, That copies of this resolution be sent to their families.

On motion of Dr. Davis, the name of Dr. Zena Pitcher was added.

On motion of Dr. Hartshorne, Dr. Da Costa was appointed a committee to prepare an appropriate notice of the Death of Prof. Dickson, to be placed upon the Minutes and to be conveyed to the family.

On motion of Dr. Cheston—

Resolved, That Dr. Askew be requested to prepare suitable resolutions relative to the death of Prof. Samuel Jackson, for entry in the Minutes.

Dr. Porter gave at some length his reminiscences of Dr. Jackson.

THANKS.

By various resolutions, the thanks of the Association were tendered—

To the Authorities and Congregation of the First Reformed Presbyterian Church, for their timely and generous permission to occupy their building.

To Drs. Wm. H. Pancoast and Hugh L. Hodge, and to Thomas W. Scott, Esq., for their entertainments.

To the Members of the Press of Philadelphia, for their faithful reports of the proceedings of the Association.

To such Railroads as had reduced their rates of fare to Delegates.

To the Members of the Medical Profession in Philadelphia; to the Faculty of the Jefferson Medical College; to the Faculty of the Medical Department of the University of Pennsylvania; and to the Citizens generally, for their kind hospitalities.

To the various Public Institutions, and the Industrial and other Establishments, which had extended their courtesies; and to the Officers of the United States Naval Station in Philadelphia.

To the retiring President, Dr. D. W. Yandell, for the able and impartial manner in which he had presided over the deliberations of the Association.

On motion of Dr. Davis, voted that, after the farewell address of the President, the Association adjourn to meet one year hence at St. Louis.

FAREWELL ADDRESS.

The President, in a brief address, full at once of humor and of feeling, thanked the members for their uniform support of the Chair; expressed a belief that the session had inspired every one, whether member or spectator, with a higher respect for the profession in America; and the hope that the same cordial good will which had characterized the present session might animate them at the meeting beyond the Mississippi.

Adjourned.

Friday Afternoon

Was devoted to an excursion to Fairmount Park, including a collation at Belmont Pavilion; and we noticed that a large proportion of the members remained to enjoy it.

MEETINGS OF SECTIONS.

SECTION OF CHEMISTRY AND MATERIA MEDICA.

Dr. R. E. Rogers, Pa., Chairman; Dr. E. Cutter, Mass., Secretary.

Wednesday, 8th May.

The Section, which held no meeting on the 7th, was called to order about 4 P.M. In absence of the Chairman, Dr. J. S. Crane was elected Chairman *pro tempore.*

DECIMAL WEIGHTS AND MEASURES.

Dr. B. F. Craig, of Surgeon-General's Office, U. S. A., made some remarks upon the *Introduction into this Country of the Decimal System of Weights and Measures*, and the following resolution was adopted as expressing the sense of the Section:

Resolved, That the inclusion of the *decigram* and of the *cubic centimetre* in the list of officinal weights and measures, is considered as desirable, and as tending to the advance of medical science.

CULTIVATION OF THE CINCHONA TREE.

Dr. Lemuel J. Deal, Chairman of the Special Committee on the Cultivation of the Cinchona Tree, made a Report showing gratifying progress in this matter; the Committee having memorialized Congress with a favorable prospect of success. A second memorial to Congress had been prepared, and was submitted to the Section.

The Report was adopted and referred to the Committee on Publication. The Committee was continued, after Dr. Stout, of Cal., had been added to it.

VACCINE VIRUS.

Dr. Ephraim Cutter, Woburn, Mass., submitted a manuscript of some 150 pp., entitled, *A Partial Report on the Production of the Virus Employed in Vaccination, in the United States of North America.* Owing to

the late hour and the small attendance, it was voted that the paper be read the next afternoon, at four o'clock, and that notice thereof be given to the Association.

Thursday, 9th May.

MEDICAL EXPERTS.

Dr. Henry Hartshorne, of Phila., offered the following:

Whereas, In all capital criminal trials, involving questions of medical jurisprudence, there is an obvious disadvantage in the testimony of scientific experts being made to appear partial and antagonistic, by their being engaged as witnesses upon one or the other side, therefore,

Resolved, That it is the sense of this Association, that in important criminal cases requiring the evidence of medical or chemical experts, the cause of justice will be promoted by the appointment by the Court, in every such case, of a commission of experts, empowered to collect all purely scientific testimony bearing on the case, and report upon it to the Court by which the case is to be tried.

Resolved, That, by the appointment of such scientific commissions, the present system of summoning chemical and medical witnesses, in criminal trials, might be dispensed with to advantage.

Resolved, That the same recommendation applies also to cases of accusation of surgical or medical malpractice.

Resolved, That the State associations be requested to bring this matter, at an early date, before their respective legislatures.

Adopted.

MAGNETIC WELLS.

Dr. R. C. Kedzie, Mich., gave an account of the so-called *Magnetic Waters* of his State, which had gained a great reputation for cures that had been produced, no doubt, by the effects of cold water, hygiene, and travelling. There were one hundred and fifty of the "magnetic wells;" and their water had been sent in large quantity all over the country.

The *savant* that reported the presence of magnetism, had based his statement on the observation that a piece of soft iron wire, connecting a cup of the water with the earth, was shown by the magnetoscope to be magnetic. Dr. Kedzie had omitted the water in the same experiment, and found a similar result. He had also tested the tubing of wells that had not reached water at all, and found it magnetic. The indications were due to terrestrial magnetism.

Prof. Rogers, Chairman, remarked that there was hardly a piece of steel or iron that would not give indications of magnetism.

A GOOD SUGGESTION.

Dr. Cutter made a proposition to recommend that, at the next meeting, there be a *Conversation upon Practical Experiences in Materia Medica*. He said there are numbers of practitioners of large and successful experience, whose valuable items of personal knowledge are buried with them. He thought that three-minute talks would bring forward such men, and greatly increase the interest in, and attendance on, the Section. Adopted.

Dr. Cutter then presented his *Report on the Production of Vaccine Virus*, and it was referred to the Committee on Publication.

Adjourned, and Minutes referred to the Association.

SECTION OF PRACTICAL MEDICINE AND OBSTETRICS.

Dr. D. A. O'Donnell, Md., Chairman; Dr. B. F. Dawson, N. Y., Secretary.

Tuesday, 7th May.

OVARIOTOMY.

Dr. S. Fitch, of Portland, Me., read a paper entitled *Three Ovariotomists*, giving, from personal observation, the peculiarities in the operation of ovariotomy as practised by Wells, by Keith, and by Atlee.

Dr. J. P. White, of Buffalo, described his own mode of operation and treatment of the pedicle. He preferred for the support of the abdomen, after the operation, broad bands of adhesive plaster. He always gave opium, regarding this as one of the most essential features of the after-treatment.

Dr. Washington L. Atlee, of Philadelphia, described in minute detail his own method of preparing the patient, of operating, and of after-treatment. Among the points brought out were these: For evacuating the bowels beforehand, he preferred castor oil to any other means. As an anæsthetic he always employed a mixture of chloroform and ether, equal parts. During the operation the patient must be kept warmly covered with blankets, only the abdomen being exposed. Except when compelled to, in very rare cases, he never made the incision more than three inches in length, and he did not think that even extensive adhesions often required a longer one. In examining for adhesions he decidedly preferred using his fingers to sweeping a sound around the tumor, as advocated by Dr. White. For the pedicle he had invariably of late years employed the clamp, and he noted certain advantages in his own form of this instrument. He had once lost a patient by strangulation of the intestine from its adhesion to the stump; and, thinking this accident liable to occur again, he had never since returned the pedicle into the abdominal cavity. As a compress and support for the abdomen, he preferred thick layers of cotton covered by a broad band of muslin. This was soft and warm. His after-treatment was expectant, opium or chloral-hydrate being given only when indicated, and by the rectum or hypodermically, if not tolerated by the stomach.

The paper was referred to the Committee on Publication.

Wednesday, 8th May.

THERMOMETRY.

Dr. Edouard Seguin, of New York, exhibited his *Fever and Surface Thermometers*, with which our readers are already familiar, and read a paper upon their clinical use. His explanation, and the new tables of temperature presented (an analysis of which is in type for our columns) were attentively listened to and favorably criticised.

Paper referred to Committee on Publication.

ELECTRO-THERAPEUTICS.

Dr. George M. Beard, of New York, read a paper on *Recent Researches in Electro-Therapeutics*. He spoke of the great and rapid improvement in apparatus, claiming superiority for America over Europe in this respect at present; and exhibited a battery and its attachments made by the Galvano-Faradic Manufacturing Co. of this city. He demonstrated his methods of "localized electrization," "general Faradization," "electrolyzation," and "central Galvanization." This last consisted in "placing the negative pole at the pit of the

stomach, and applying the positive over the head, sympathetic, and pneumogastric in the neck, and down the spine, so as to bring the whole central nervous system under the influence of the current." It had proved very useful in certain obstinate skin diseases, as well as in hysteria, neuralgia, neurasthenia, and many other nervous affections.

Among the points which he had recently demonstrated were these:

The nutrition of children was often much improved by general Faradization. Two pups of a litter of four were treated by the speaker in this manner, and were found at the end of a month to weigh several ounces more than their mates.

Children bore electricity better than adults; but some constitutions could endure it, however administered.

Malignant growths could sometimes be treated with great advantage by a method of "working up the base electrolytically." The advantages of electrolysis in the treatment of these tumors were less hemorrhage, less shock, less danger of pyæmia, and more rapid healing. It would almost always relieve the pain of tumors, but did not prevent constitutional infection.

Dr. A. B. Crosby, of New York, spoke of a case of chronic eczema of the leg under his care, which had resisted other treatment, but was decidedly improving under "central Galvanization," as just described. Also of a case of organic stricture of the rectum, where he had assisted Dr. Beard in an electrolytic operation after returning the sphincter.

Dr. A. B. Palmer, of Ann Arbor, moved that those portions of the paper devoted to recent original research be prepared for the Committee on Publication.

Carried.

Dr. W. L. Atlee read a letter reciting a case of *Stricture of the Vagina* in a puerperal woman. It was discussed by several members.

Thursday, 9th May.

In the absence of the Secretary, Dr. J. K. Bartlett was elected Secretary *pro tem.*

Voted that the paper on *Yellow Fever* by Dr. Joseph Jones, which had been referred to the Section, be returned to the Association, as there had been no time to examine an essay so voluminous.

Dr. Beard had been unable to revise his paper, according to yesterday's vote, and it was returned to him with the request to publish in a medical journal.

Dr. Sager, of Ann Arbor, presented a *Deformed Pelvis*, with interesting remarks, and was followed by Drs. Parry, of Philadelphia, and Pallen, of St. Louis.

Adjourned, and Minutes referred to the Association.

SECTION OF MEDICAL JURISPRUDENCE, HYGIENE, AND PHYSIOLOGY.

Dr. S. C. Busey, D. C., Chairman; Dr. E. L. Howard, Md., Secretary.

Tuesday, 7th May.

The Section simply met and adjourned.

Wednesday, 8th May.

VASO-MOTOR PHYSIOLOGY.

Prof. Henry Hartshorne, M.D., of Philadelphia, read a paper *On the Present Condition of Vaso-motor Physiology.* He remarked that, having in 1856, in an "Essay on Arterial Circulation," published in the Transactions of the American Medical Association, advanced views somewhat at variance with the prevailing opinions, he had been led to believe that, recently, the progress of inquiry had developed facts which approach to a demonstration of the truth. Currently it has been held, as stated in the works of Virchow, Bernard, Huxley, Marey, B. W. Richardson and others, that the whole function of the muscularity of the smaller arteries (incorrectly confounded sometimes with the capillaries) is, to limit, by a flood-gate or stop-cock action, the flow of blood caused by the impulse of the heart. Against this view, there have been the opinions and reasonings of John Hunter, Sir Charles Bell and a few others of the older writers; and an overwhelmingly strong presumption derived from general physiological analogy. Dr. Hartshorne wished to point out the progress made since the publication of Prof. Lister's observations in 1858, and, more especially, the recent very important contributions toward it by Legros and Onimus (*Journal de l'Anatomie et de la Physiologie*, 1868-70). It was necessary, in order to perceive the bearing of the facts thus brought forward, to review briefly the whole ground of the inquiry. Attention was therefore called to the following points:

1. Bowman, Marey and others have abundantly demonstrated that the universal law of muscular fibre, preëminently obvious in the smooth muscle of organic life, is alternating, rhythmic or peristaltic contraction. Presumably, therefore, we should find this true of the middle coat of the smaller arteries; and the burden of proof rests with those who assert the contrary. And, if it be alternating, we have every reason to believe that it is *propulsive*, not restrictive in its action.

2. Certain facts in comparative physiology are only to be thus explained; as, the completeness of the round of the circulation in fishes with only a respiratory heart; the arterial dilatations taking the place of the heart in *amphioxus;* the distribution of arterialized blood from the reservoir-like arterial networks of the whale; the ordinary circulation in most articulates, which have no heart.

3. *Acephalous fœtuses* are always *acardiac*; the propulsive power of the arteries is necessary to carry on their circulation. At a certain stage of development, every human fœtus is likewise acardiac, as truly as an insect or a myriapod.

4. Erectile tissues have been recently and carefully studied anew by Legros, who has decided that the evidence shows that "it is indeed *the contractile element of the arteries* which acts to produce erection."

5. Many familiar cases of physiological erethism are (as pointed out in Dr. Hartshorne's Essay of 1856) manifestly of an active character. Such are: the determination of blood to the maxillæ in dentition; to the ovaries in ovulation, the uterus in gestation, the mammæ in lactation, and the testicles during the heat of male animals; the vascularity of the newly-growing antler of the deer, etc. To none of these instances can the idea of "paralytic dilatation" of the vessels, with any show of reason, be made to apply.

6. Further facts are these: in paralyzed limbs the pulse is often diminished in force and fulness; when mortification occurs, or a limb is crushed by a railroad car, or torn by a gunshot wound, little or no hemorrhage occurs. Here a truly paralytic state of the arteries is produced, and *the blood ceases to flow.* Under some other circumstances there is, of course, a paralytic dilatation of the vessels; as when they are exhausted by fatiguing over-contraction, or when the sympathetic nerve has been divided, as in Bernard's famous experiment with the rabbit's ear.

In decapitated criminals, Robin observed that the blood does not spout from the divided carotid and ver-

tebral vessels, but goes on through the head. Legros and Onimus found that when the large vessels are tied in animals, the circulation continues; in cold-blooded vertebrated animals, for a considerable time. Chauveau similarly found that firm compression of an arterial trunk, so as to obstruct its current, does not always arrest its pulsation; and Legros and Onimus observed, in the retina of a man whose arteria centralis had been obliterated by a clot, distinct waves of pulsation still continuing in the minute vessels.

7. Dr. S. W. Gross's paper* was cited, showing the important influence of compression of an arterial trunk supplying blood to a part in a state of inflammation; the active participation of the arteries in that morbid process being thus made clear.

8. Application of these general facts to pathology becomes now important; as, in reference to the nature of the condition ordinarily called fever; the spasmodic constriction of the bloodvessels in cholera,—unduly restricted by Dr. George Johnson to those supplying the lungs; and the explanation of the hypertrophied state of the bloodvessels of the kidneys, often found to occur in Bright's disease.

Lastly, it is concluded that we have now proof enough to show positively that *there is a true arterial systole*, following and carrying on the propulsive movement of blood begun by the heart, instead of the mere "stop-cock action" accepted still by most writers. In favor of this last, there is really *nothing* except the somewhat hasty interpretation of one or two galvanic experiments by the Webers, more than twenty years ago; and the taking for granted a conclusion from them, in contradiction to all general analogy. It may be considered that the true factors of the pulse are four: 1. The heart's impulse; 2. The *elastic* contractility, especially of the larger arteries; 3. The closure of the aortic valves; 4. The *muscular arterial systole*. As this last occurs *after* the others, and in an artery so remote as the radial at the wrist, as late as the second sound, accompanying the shutting of the aortic valves, its effect *must* be to *aid* in propelling the blood. It cannot be *nil*, because it empties the arteries after death. It is not a persistent rigidity or tonic contraction, or else it could be felt in some arteries in the intervals of the pulse, as it cannot. On the whole, it would appear that, on this subject, with a vast deal of laborious experimentation, some want of care in reasoning has left the problem unduly long in reaching a final solution.

The paper was referred to the Committee on Publications.

THE LEUCOCYTE.

Dr. Jos. G. Richardson, of Philadelphia, Chairman of the Committee "*On the Structure of the White Blood-Corpuscles*," presented a report on that subject. After a brief review of our present knowledge in relation to this important morphological element, he remarked:

"From this abstract it appears that Stricker and Rollett, who upon this subject occupy the front rank among German microscopists and histologists, whilst inclining somewhat to the view that the white blood-corpuscle, at least in certain stages of its development, possesses a cell wall differentiated in structure from the cell contents, do not accept as proven the existence of such a membrane; that they also consider that the laws according to which leucocytes take up fluids are unknown, although they deem it probable that diffusion plays a part in the process; and further, they seem to think that the molecular or 'dancing' movement in the salivary corpuscles, differs from that seen under certain conditions in colorless blood, pus, and other corpuscles, insomuch as it ceases on the addition of from one-half to one per cent. solutions of common salt, which, they say, still permits the movements of fresh pus or lymph corpuscles to continue."

After a series of experiments, performed to further elucidate these three points left undetermined by Prof. Stricker, in which he studied the effects of chloride of sodium, chloride of iron, and ferrocyanide of potassium solutions of various strengths upon the leucocytes of blood, pus, mucus and saliva, the writer concluded that—

"The white blood corpuscle is a cell composed of a nucleus (or nuclei), which latter possesses the power of voluntary amœboid movement, is insoluble in water, but is capable of slowly imbibing that fluid and increasing to nearly double its normal size. The cell wall of the corpuscle is a membranous envelope, insoluble in water, too thin to exhibit a double contour with a magnifying power of 1200 diameters, but firm enough to restrict the movement of its contained granules. Its exterior is somewhat adhesive so that surfaces or particles coming in contact with it are liable to become attached thereto. Some phenomena observed lend countenance to a theory that this membrane is dotted with minute pores, which permit delicate threads of the soft protoplasm to be extruded, and whose edges, if the projection still continues, during the amœboid movement, are carried outwards as a sheath to all except the extreme point of the narrow tongue-like process. The material, occupying the space between the capsule and the nucleus, denominated the protoplasm of the cell (the fibro-plastin of Prof. Heynsius) is a soft jelly-like matter, in which the power of amœboid motion resides. It appears to be soluble in water, and saline solutions in all proportions, and when freely diluted loses its amœboid power, which however is regained in a majority of cases when the excess of fluid is withdrawn."

In support of this view of its structure he observed: "I think the surprising rotary motion noticed after the action of ferrocyanide of potassium solution, as described in exp. 6, is even more conclusive; for it appears almost incredible that molecules and nuclei could revolve so quickly unless they floated in a fluid of low specific gravity, or again, that a cell made up of liquid so rare as to permit particles to move through it with such velocity, could either restrict them within its borders or retain its oval shape, except by the aid of a cell wall of considerable firmness. To recur to a simile which I have already used in reference to the red blood-disc, it seems to me that this hasty rotation of all the contents within a white blood-corpuscle, furnishes the same kind of proof in regard to its parietes, as the swimming of a shoal of little gold-fish around the inner surface of their vase affords us first—that they move in liquid and are not embedded in jelly; and secondly, that they are confined by a boundary wall which is strong enough not only to prevent them from passing beyond its limits, but also to preserve its shape in spite of the pressure of fluid within its cavity."

"The laws by which leucocytes take up and part with liquids seem to be simply those of the dialysis of fluids through animal membranes by endosmosis and exosmosis, as studied by Graham on a larger scale in 1855; the rapid inward current from the rarer solution of higher diffusive power, through the cell wall, distending that membrane, and diluting its contents, until an equilibrium of the endosmotic and exosmotic flow is attained, or the capsule is burst by the centrifugal pressure of the accumulated fluid."

"In regard to the motion of granules within the salivary and pus corpuscles, my experiments so fully

* *Philad. Med. Times*, Jan. 16, 1871.

and uniformly corroborate each other, that, reluctant as I am to dispute the observations of such celebrated histologists as Stricker and Pflüger, I cannot but think that no essential difference exists in the effects of salt solutions of various strengths upon the leucocytes of saliva, pus, and blood; and from this circumstance, in conjunction with the interesting fact discovered in exp. 5, that the salivary globules, when acted upon by the denser saline liquid, *contract to the size of the white blood-corpuscle and manifest like amœboid movements*, I conclude that my theory—that the corpuscles of the saliva are "migrating" white blood-globules which, wandering out into the oral cavity, have simply become distended by the endosmosis of the rarer fluid in which they float (see *Handbook of Medical Microscopy*, p. 164)—may now be considered as established upon a firm experimental basis."

The practical deductions drawn were that, "in the first place, the magnitude of the leucocytes in a neutral fluid of known composition, such, for example, as the renal secretion, affords us a useful index to its specific gravity; and, in the second place, the prompt rupture and destruction of white blood-corpuscles when acted on by water suggests that in all surgical operations a three-fourths of one per cent. salt solution (54.6 grains to the pint) would have a much less disturbing influence upon the tissues washed or sponged with it than pure water. Lastly," he remarked, "I trust that further investigation of the revolving movements sometimes (not always) produced by solution of ferrocyanide of potassium in the white blood-corpuscle may throw some light upon the curious rotary motion of granules in the cells of plants, which has for a long time been deemed inexplicable, and by a late writer is attributed to the presence of supposed cilia upon the inner surface of the cell wall."

Paper referred to the Committee on Publication.

There being nothing further to come before the Section, it adjourned, referring its Minutes to the Association.

SECTION OF SURGERY AND ANATOMY.

Dr. John T. Hodgen, Mo., Chairman; Dr. W. F. Peck, Iowa, Secretary.

Tuesday, 7th May.

The Section met at half-past three o'clock, in the main hall, and, in the absence of the Chairman, Dr. Gurdon Buck, of New York, was called to the chair, which he vacated on the entrance later of Dr. Hodgen.

URANOPLASTY.

Dr. J. Solis Cohen, of Philadelphia, exhibited a patient upon whom he had successfully operated, a few months since, for the closure of an enormous cleft in both hard and soft palate, by a modified method, completed in a single operation. The patient was a young girl, some 16 years of age, in perfect health. The cleft was congenital, one and five-eighths inches in length, and seven-eighths in its broadest diameter, and permitted a free view of the entire glandular tissue of the vault of the pharynx, and of the whole of the pharyngeal extremities of the Eustachian tubes. The operation had been performed by the speaker and Dr. Packard, in a sort of surgical duet, a method which they had found convenient and expeditious in a previous operation. At that time Dr. Cohen had proposed to *split* the edges of the palate, instead of paring them, but had been dissuaded from the attempt by his associate, in view of the callousness of the edges. In the present instance he had determined to split the edges of the hard palate, instead of making the usual incision along the cleft, thus raising the entire flap from the surface of the bone, and saving a loss of one-eighth inch of material. Dr. Packard immediately proposed continuing the slit into the soft palate also, instead of paring it; and the operation was performed in this way, each gentleman operating on one side. The patient being etherized, the New York mouth-gag was introduced, and the operation expeditiously performed in the following manner:—The edges of the cleft being split lengthwise by a shallow incision, the flap of mucous membrane and periosteum was raised from the hard palate, according to the method of Langenbeck, the blunt and angular rasp, used to detach the periosteum, coming into the cleft through the slits in its edges. A double-cutting knife was introduced into the soft palate, just below the line of incision in the hard palate, and the muscles of the palate divided, after the method of Pollock, by raising and lowering the handle of the knife, and thus sawing with its blade, so as to leave an anterior wound no larger than the blade of the knife. The parts were brought together by several points of wire suture, Langenbeck's needle being used in uniting the flaps from the hard palate, and a semicircular needle, in Schwerdt's forceps, being used for the more movable soft palate. The fine sutures in the hard and soft palate were clamped by a shot on either side of the cleft; the two in the uvula and lowermost portion of the soft palate were clamped by a single shot respectively.

The operation was a marked success, as exhibited by the examination of the patient. Hæmorrhage from the denuded bone took place on the first and second days, and was checked by pledgets of lint, saturated in Monsel's solution. These were removed in a day or two, and the parts beneath were granulating nicely. The patient was nourished by feeding her from a spoon. Two or three sutures were removed on the third day; the central suture cut out on the fourth day, leaving a gap comprising the space between the adjacent sutures; and the others were removed at intervals, the last suture being removed on the eighth day. Recovery was prompt, but there remained an irregular opening in the centre of the line of junction, the size of the end of a lead-pencil. This gradually contracted, without interference, and at present there was no sign of an opening, and only a depression at that place no larger than the point of a pin.

The points to which Dr. Cohen called attention were these: the benefit gained in this instance by splitting the edges instead of paring them, and thus saving loss of tissue; and the proof that nature is sometimes adequate to close an aperture in the line of union, without interference from knife or caustic.

The Doctor stated, in conclusion, that he had imagined an operation which should consist in dividing the flaps of the soft palate vertically, so as to represent flaps analogous to those taken from the hard palate; the anterior flaps being brought together, a raw surface would be left posteriorly, while a similar raw surface would be left anteriorly at the side of these flaps. These would, he thought, heal nicely, and leave a soft palate large enough to be applied against the wall of the pharynx—an indispensable requisite to distinct articulation. Muscular fibres would exist in all four flaps made in this operation, and thus the contraction of their fibres would effect an occlusion between the upper and lower portions of the pharynx. In the case exhibited articulation had been much improved, but it could never become perfect, inasmuch as the new palate was too far removed from the pharynx to admit of its being pressed against it by muscular contraction.

Dr. McArthur, of Ill., was not sure that the closure of the cleft by newly-formed bone was due to the periosteum in the flaps, but thought it might be due to the areolar tissue, which under irritation would sometimes develop osteogenetic properties.

Dr. Cohen said there was nothing but the periosteum to produce the bone on the posterior surface of the flaps. Experience had shown that in these cases periosteal flaps did produce bone, and those of mucous membrane alone did not.

Dr. Abel (?), of Miss., inquired what was the best age for performing this operation, and the allied operation for hare-lip. In the case of a boy about fourteen years old, with very wide cleft of the hard palate, upon which he had seen Dr. Sayre operate, the patient was subjected for a year previous to frequent titillation of the throat with a feather. As a consequence he did not cough during the operation, nor during the whole time of recovery; and the result was highly satisfactory, very good voice and articulation being obtained.

Dr. Cohen could reply only from his reading, as this was an isolated case in his own experience. He would himself prefer to wait till the age of ten or eleven years; but Dr. Smith, of England, had operated at eight or nine months. His gag—a kind of bit—enabled him to do this very well; and a similar one had certainly worked admirably in the present case.

Dr. Gurdon Buck, of New York, had in two cases within the past year happily applied the method of splitting the edges of the flaps to the lobe of the ear, where it had been slit down by the ear-ring. Instead of paring the edges he split them deeply, and then carried this splitting incision into the angle of the slit, so as to facilitate the turning out of the divided portions. He then joined the two surfaces separately by two sets of sutures, one set for each surface. Thus a broad surface for adhesion was secured with no loss of substance, and the result was very good. He proposed to try the same plan in some cases of hare-lip.

Dr. Cohen was glad to have this testimony, from so distinguished a source, to the advantages of the method, which he was not before aware had been previously employed. Dr. Packard had already applied it to hare-lip in some instances. In cleft palate it was certainly a great point gained if we could not only avoid the sacrifice of tissue, but even absolutely increase the breadth of the flaps by thus drawing a little from either side. In reply to a question, he said that he had used an ordinary scalpel to split the edges, not a knife with bent shaft, and there was no difficulty about it.

Dr. Kinloch, of S. C., believed that the same method had been employed by Mr. Simon in cases of vesico-vaginal fistula, where it was often very important to get a broad adhesive surface. He wished to know whether the sutures were more or less liable to cut out on this plan.

Dr. A. C. Post, of New York, had, a number of years ago, performed an operation upon the same principle in a case of urinary fistula in front of the scrotum, a part where the closure is attended with great difficulty on account of the thinness of the tissues. By securing a broad raw surface in this way, and holding the parts together by a sole-leather splint, he had obtained an excellent union.

Dr. Krackowizer, of New York, said that Dr. Cohen had certainly the advantage of success in his single case; but he thought there were some theoretical objections to it which might be encountered in many cases, perhaps the majority. The configuration of the parts would tend to make both flaps collapse after the incision; and it must be a matter of great difficulty to introduce the sutures so as to make the split edges spread out and bring only the bloody surfaces in contact, leaving nowhere any mucous surface interposed to prevent union. Although some little breadth was gained for the new palate by the operation, still this would be insufficient after all for the purposes of articulation. It must be admitted that this operation was more difficult than the old one, and when it added so little to the function of the palate it seemed hardly advisable to run the greater risk of failure it entailed.

But he doubted if this operation in any form would hold its place more than a couple of years longer. For cosmetic effect it could not be compared with other plastic operations, such as that for hare-lip. As nothing was gained in appearance and so little in function, what, he would ask, was the real value of the operation? That the speech was somewhat improved was admitted on all sides, but it remained far from perfect. Artificial palates would improve it far more than this operation, and every five years saw great advances made in their construction. Kingsley's soft-rubber appliance was decidedly superior to anything that preceded it, and half a decade hence we might look for something better still. Why then should we resort to an operation which must preclude its use? We might make an exhibition of surgical skill, it is true, but our patient would be worse off than before.

As to the proper age for operating, he was compelled once to perform this operation on a child perhaps a fortnight old, to save it from death by suffocation. The lower jaw was congenitally so small and receding that the tongue did not find room, and constantly fell back against the epiglottis; so that the child's life was a perpetual struggle to keep from strangling. After the operation it breathed much easier, but lived only a short time. The fatal issue was owing partly, no doubt, to exhaustion from the operation, but partly also to insufficient nourishment since birth. On post-mortem examination he found that union had taken place at two points, but that gangrene had occurred where two of the sutures were inserted at the junction of the hard palate with the soft.

Dr. Montrose A. Pallen, St. Louis, said that this mode of splitting the flaps had been several times applied by Dr. Hodgen, of St. Louis, Chairman of the Section, to lacerations of the perinæum.

THE ST. LOUIS OPERATION FOR VESICO-VAGINAL FISTULA.

Dr. Pallen had risen, however, to exhibit the instruments, and describe the method, employed in what had come to be known as "the St. Louis plan" of operating in vesico-vaginal fistula. Not every one had the skill or the opportunities of a Sims, or an Emmet; it was desirable, therefore, for the majority of the profession that the operation should be simplified as far as possible.

The instruments exhibited were these:—1. *Scissors*, for paring the edges of the fistula. There are several pairs of these, some straight, others bent flatwise, near the pivot, at various angles, so as to operate with the greatest convenience upon a wound in any position. The special peculiarity of these scissors is that they have but one cutting edge, which is opposed to a square edge of softer material. This is to insure the opposition of the blades so necessary to trimming smoothly the often indurated tissues. They are the invention of Mr. Leslie, an instrument maker of St. Louis. 2. *Needles*, which are the finest cambric sewing-needles ground to trocar points. These are threaded with fine but strong silk, doubled so as to make a loop without a knot, through which may be passed the small end of (3.) the *suture wire*. This is made of moderately large silver

wire, sand-papered to extreme thinness at one extremity, so that its small end, even when doubled through the loop of silk, is no thicker than the fine needle used. The object of this is to allow the wire to follow the thread with perfect ease, while, as it is drawn through, its larger portion plugs up the hole made by the needle so as to prevent any bleeding. 4. The *needle-holder* requires no special mention. 5. The *suture-gauge*. From a handle extends a shaft of flexible copper, terminating in a flattened extremity. This flattened portion has a base, next the shaft, perhaps five-eighths of an inch broad, while its apex is about one-eighth of an inch. It does not taper gradually, but by three or four opposed rectangular notches. This gauge, and we believe also the tapered wire, were invented by Dr. Hodgen. 6. *Forceps*, for seizing and twisting the wire.

In paring the edges of the fistula it is often advisable not to take away the rejected tissue piecemeal, but to remove it as a complete ring, since thus it can be more easily held. The wire having been drawn through both flaps nearly to its thick extremity, it is cut off at the proper length, and the edges of the wound are approximated to the exact degree at which it is desired they may be permanently retained. The suture-gauge is then placed flat upon them in such a manner that it shall just touch the wire on either side at its points of entrance and emergence. The ends of the wire are next seized by the forceps, and twisted as firmly as possible down upon the gauge, which securely protects the tissues from injury. The gauge is now removed, and the relaxation consequent upon this gives sufficient room for swelling. It may be mentioned that if the same wire is used for more than one suture, it should be freshly annealed in a candle flame every time it is passed.

In fissures of the neck of the uterus, so common after parturition, the fine needles above described were found to pass with the greatest ease through the hard tissue of the part; and such was the facility with which the edges of the fissure might be at any time approximated by the aid of the suture-gauge, that the speaker was accustomed to allow his patients to walk about immediately after the operation.

LINEAR EXTRACTION OF CATARACT.

Dr. H. Knapp, N. Y., gave a history of the operations for cataract, describing in detail the various methods which had been successively in vogue, and demonstrated the special features of the *Linear Mode of Extraction*, for which he claimed superior advantages.

Dr. O. D. Pomeroy, N. Y., preferred the flap method to the linear, because it was attended with less difficulty and consequently with less hazard.

The Section then adjourned.

(To be continued.)

Original Communications.

TWO CASES OF ERYSIPELAS OBSERVED WITH THE FEVER AND SURFACE THERMOMETERS.

By E. SEGUIN, M.D.,

NEW YORK.

The mode of recording the vital signs by curves traced on diagrams gives at a glance a bird's view of their oscillations; but the tracing of these curves is of itself an art not attainable by every physician. Besides, to afford a positive knowledge of their correlative value, these curves need yet, after much care of the pen and expense of burin, to be tabulated in computable figures; therefore, we give the preference to the tables, which, it is true, exact a formal reading instead of a glance, but which contain more material for thoughts, and which anybody can write, print, and read as book matter. Those tables exactly cost to the physician ten minutes at each visit, and ten more for the weekly computations.

The scale used in these tables is the centigrade, adapted to physiological observation by transferring the zero from the point of melting snow—which has nothing to do with anthropology—to that of normal

No. 1. Name, S—— Age 45. Sex F. Disease, Erysipelas.								Septenary.
1872. February.	23	24	25	26	27	28	29	
Days of Disease.	I	II	III	IV	V	VI	VII	No. 1.
	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	
General temperature taken at the axilla. Fever / Zero Health / Depression	3.2 4 4	4.2 4	5 5	4 3.2 3.1	3	4 3	2	Total up. 51.7 : 14 = 3.7 ; Total down "
Daily average	3.6	4.1	4.5	4.5	3.15	3.5	2.5	Average of temp., 25.85 : 7 = 3.7
Daily difference	.8	.2	1	1	.1	1	1	Id. of difference, 5.1 : 7 = .72
Local temp. (1) above / below	6	6.5	7	6.3	4.2	2	2	Id. of local temperature, 4.9
Pulse	100 106	104 112	108 118	96 89	80 82	80 100	77 72	Id. of pulse, 94.5
Respiration	28	22	20	22	17	16	16	Id. breathings in { effervescence 23 / defervescence 16½

No. 2. Name, E——— Age 24. Sex, F. Disease, Erysipelas.

1872. March.	23	24	25	26	27	28	29	Septenary.
Days of Disease.	I	II	III	IV	V	VI	VII	No. 1.
	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	
General temperature taken at the axilla. Fever / Zero Health / Depression	7 4	2.5 5.5	3 6	3 5.7	2.5 5.6	.7 —0—	1.4 2.3	Total up, 49.2 : 14=3.5 One zero. Total down, "
Daily average	5.5	3	4·5	4.35	4.05	.35	1.85	Average of temp., 23.6 : 7=3.34
Daily difference	3	3	3	2.7	3.1	.7	.9	Id. of difference, 16.4 : 7=2.35
Local temp.(1) above / below 0	2	8	8.5	4	4.8	2	2	Id. of local temp., 31.3 : 7=4.5
Pulse	122 125	112 115	98 120	104 115	102 122	108 80	80 88	Id. of pulse, 1.501 : 14=107

1872. March—April.	30	31	1	2	3	4	5	
Days of Disease.	VIII	IX	X	XI	XII	XIII	XIV	No. 2.
	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	
General temperature taken at the axilla. Fever / Zero Health / Depression	3.2 6.6	5.8 6	2.3 6.2	2.2 —0—	.2 .7	.3 1.2	—0— .7	Total up., 34. : 14=2.42 Two zero. Total down, 1.4 : 14=.1
Daily average	4.9	5.9	4.25	1.1	.25	.75	.35	Average of temp., 15.4 : 7=2.2
Daily difference	3.4	.2	3.9	2.2	.9	.9	.7	Id. of difference, 12.2 : 7=1.7
Local temp.(1) above / below 0	3.5	5	4.5	1	—0—	—0—	—0—	Id. of local temp., 14 : 7=2
Pulse	98 120	106 116	104 96	92 64	70 82	82 84	82 88	Id. of pulse, 1264 : 14=90

1872. April.	6	7	8	9	10	11	12	
Days of Disease.	XV	XVI	XVII	XVIII	XIX	XX	XXI	No. 3.
	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	M ~ E	
General temperature taken at the axilla. Fever / Zero Health / Depression	0 —— .9	3.8 5	5 1.7	0 —— .8	.5 1	.5 .5	.6 .4	Total up., 16.5 : 14=1.2 Two zero. Total down, 3.3 .14=.23
Daily average	.45	4.4	3.35	.4	.75	.0	.5	Average of temp., 5.65 : 7=.8
Daily difference	.9	1.2	3.3	.8	1.5	1	.2	Id. of difference, 8.9 : 7=1.2
Local temper. above / below 0	2	3.5	4.3	2	1	—0—	.5	Id. of local temp., 7.3 : 7=1
Pulse	78 88	98 96	76 92	76 76	65 82	66 82	68 82	Id. of pulse, 1.025 : 14=73

(1) The local sickly temperature is expressed by the difference found between surfaces isothermal in health; the healthy one being relatively the norme.

human health. That is the 0 of the medical thermometer, equivalent to 37° Centigrade, or to 29.60 Réaumur, or to 98.6° Fahrenheit. (See table of equivalents in *Medical Thermometry and Human Temperature*. By A. C. Wunderlich and E. Seguin. W. Wood & Co., Publishers, New York.)

With this—the only scale of human temperature—the fever-thermometer has been applied to the axilla, and two surface-thermometers, one on the seat of the phlegmasia, the other on a surface isothermal with it in health.

Thus operating, the fever-thermometer marks the degrees of fever above zero, and the degrees of depression below; and the surface-thermometer, which is superposed to the healthy surface, gives the relative normal temperature; whilst the other instrument, superposed to the sick spot, marks the deviation of temperature from that norme attributable to the local affection. If I am not mistaken, this concurrent use of the two thermometers offers the only possibility of mathematically measuring the relations of genesis, reaction, intensity, and persistency of general fevers to local phlegmasia.

This leaves us on the threshold of the question at issue in this paper: *What are the relations of the general fever to the local phlegmasia in erysipelas?* . . .

To appreciate the opportuneness of this inquiry, let the views of the gravest authorities encounter each other. Erysipelas is, for Sydenham, a fever, an ebullition of the blood (our own effervescence); for Cullen, an inflammatory fever; for Rayer, an exanthematous inflammation; for Velpeau, a superficial inflammation of the skin; for Hosack, a pure inflammatory disease of the skin; for Watson, an eruption preceded by fever; for Niemeyer, an *erysipelatous dermatitis;* for Reynolds, an acute specific disease, characterized by a fever of a low type, and a peculiar inflammation of the skin; Trousseau, more circumspect yet, enumerated what it is not, but omitted to tell what it is. (*Clinique de l'Hôtel Dieu*, T. I, p. 164.)

Evidently, to conciliate the dermatous theory, contracted by Niemeyer, with the daring generalization of Sydenham, will demand a great deal of labor. Happily, where our predecessors could surmise and conjecture upon the results of their sensorial observation, we are enabled to calculate the mathematical data furnished by our instruments of positive diagnosis, and mainly by the fever and surface thermometers; at guessing, genii could be misled; at reckoning, ordinary men may attain to wonderful accuracies.

It is in this hope and in fulfilment of this duty that the accompanying tables have been arranged. The two observations which they record, having been taken from a private and limited practice, cannot offer to the mind of the reader suggestions so numerous nor so forcible as would others selected from hospital reports. But the latter cannot fail to come *en suite*, since the fever and surface-thermometers begin to be extensively used to test the action of local upon general inflammations, and *vice versâ*.

With the same object almost exclusively in view, the accompanying cases will be bereft of the details which adorn routine observations; even their treatment will be dismissed with the assurance that it has been *supporting*, in strict accordance with the indications of thermometry.

The first case was of a ripe woman of greater physical expansion than strength, and subject to previous attacks. In her, the general fever was never as high in proportion as the local, though it preceded it; its daily differences being as small as one-tenth of a degree, never above one degree, averaging 0.72. In keeping with this remarkable moderation and uniformity of the general temperature, the pulse never rose above 112, nor fell below 72. Alone, the respiration, by its initial frequency, averaging 23 during the effervescence, created an apprehension of pneumonia—then prevalent—but soon settled at 16½ in the defervescence. Quite in keeping with the greater height of local temperature was the formation and oozing out of purulent matter under the right eye, which left a persistent, thick scab. The defervescence, moderate as the effervescence had been, closed the seventh day at 2, apparently cut short by bilious critical evacuations, which suddenly brought the temperature to zero-norme, and the patient into convalescence with a ravenous appetite.

The second case—that of a primipara not yet completely recovered—was beset with more perils; still it ran its course of three septenaries with a regularity which gives it the appearance of one of these beautiful types created by the synthetic art of Wunderlich out of thousands of homologous cases; therefore, let us mark the mathematics of its evolution.

In the first septenary the effervescence is protracted to the fifth day; in the second, to the third; in the third and last it is subdued in forty hours.

In the first septenary the average of general temperature is 3.5; in the second, 2.42; in the third, 1.2.

In the first septenary the difference between the daily maxima and minima averages 2.35; in the second, 1.7; in the third, 1.2.

In the first septenary the local temperature averages 4.5; in the second, 2; in the third, 1.

The pulse, in keeping with the pyretic symptoms, averages in the first septenary 107; in the second, 90; in the third, 73 beats.

The respiration remained so near the norme that it seemed useless to record it.

The convalescence, which is yet in progress (28th of April), caused a rise of the temperature of 0.5 to 1.5, and a corresponding acceleration of the pulse.

As for the main question: In what relations of precedence, causation, duration, and reaction stand the general and local temperatures in the two cases therein reported? . . .

In the first case, the fever preceded the phlegmasia by fully twenty-four hours, and overlapped it by thirty-six. In the second case, the initial fever reached at once its maximum, 7; and the phlegmasia its 8, the second and third days. In the second septenary the fever reached its maximum, 6.6, the first day, and the phlegmasia its 5, the second. But in the third septenary the fever-heat rose only the second and third day; whilst that of the phlegmasia rose steadily from the first to the third day, after which it no more rose above zero.

These are mathematical facts.

What can be deduced from them?

I will venture to surmise that:—

1. If erysipelas did not show itself typical in its daily undulations, it proved to be endowed with septenary fluctuations, which have the appearance of a type.

2. No less distinct than this septenary cycle was its division in two periods; one of effervescence and the other of defervescencee; though, as the elements of ustion wore away, the days of combustion became less, and those of cooling more numerous.

3. One may also surmise, from the march of the local symptoms at the end of the second and at the beginning of the third septenary (see Case No. 2), that a complete resolution of local temperature, even to zero = health for several days, is no guaranty against

a relapse; guaranty to be sooner looked for in the state of the general temperature, and particularly in the *differences* between the daily minima and maxima (see these *differences* in both cases).

These remarks do not throw a great light on the subject, to be sure; but we must remember that the pathological law of a disease is not expected to burst forth from one or two observations, but from one million or more. Ask Wunderlich.

NEW-YORK, April 28, 1872.

Progress of Medical Science.

ABORTION OR PREMATURE LABOR NOT PRODUCED BY QUININE.—In a paper read before the Elmore County Medical and Surgical Society, styled, "Will quinine originate contractions in the gravid uterus sufficient to produce abortion or premature labor?" by James C. Harris, M.D., Wetumpka, Alabama (*Am. Practitioner*), it is asserted, after an experience of thirty-three years, that quinine, as ordinarily administered, does not possess any properties that are in the least calculated to produce contractions in the gravid uterus; but, on the contrary, under certain circumstances, he has always relied upon it as the very best remedy to destroy the cause, and break up the concatenation of symptoms, upon which, in that section of the country where intermittent fevers abound, abortion frequently depends.

ANALYSIS OF URINE IN A CASE OF MALARIAL HÆMATURIA.—T. O. Summers, M.D., of Greensboro, Ala. (*Nashville Journal of Medicine and Surgery*), submits the result of his investigations upon the pathological condition of the urine in the disease commonly known as *hemorrhagic malarial fever*, or cachæmia. The first specimen of urine presented for analysis was of a deep-red color, perfectly opaque, and of an alkaline reaction, and of a specific gravity of 10.25. Under a microcope of 500 diameters, only two well-defined blood-corpuscles to the inch were detected, though the coloring matters of the blood appeared to be generally diffused. *Leucocytes*, or pus-corpuscles, were very numerous—about thirty to the inch. The crystals of glykocholate of soda were well defined, surrounded by drops of the uncrystallizable tauro-cholate of soda, which latter were only distinguishable from oil-globules by their chemical properties. Crystals of triple phosphates were not so abundant as in normal urine. None of the other biliary salts were recognizable under the microscope. Crystals of creatine and creatinine existed in large proportions. The sediment of the urine was strongly colored with urosacine. The second specimen of urine from the same patient, at a more advanced stage of the disease, presented very much the same characteristics of the former, with exception of the color, which was not so deep.

The third specimen presented scarcely any of the characteristics of the other two; but, after standing, became of a bright amber color, and with the exception of the sediment, which was for the most part albumen, in every respect normal in its appearance and constituency. Its reaction was acid. The tests usually resorted to for the detection of bile failed to establish its presence. Pettenkofer's test was not relied on, though it was applied.

DETECTION OF BILE.—Dr. T. O. Summers, M.D., of Greensboro, Alabama (*Nashville Journ. Med. and Surgery*), pronounces Pettenkofer's tests for the detection of bile, though the one usually resorted to by the best physiologists, and generally relied upon, the most uncertain and unsatisfactory of all the tests which have been applied for the detection of bile. He has produced the same results with this test where he knew there was and could be no bile present. It is claimed for this test, that the reaction is produced by the presence of either of the biliary substances proper; but one wishes to know, not only whether bile is present or not, but whether, having been present, it has left its impression, and then undergone decomposition, or whether one or more of its constituents are present, thus rendering its detection by this test absolutely impossible. He therefore relies on the microscope almost exclusively for the detection of biliary substances proper, as also the coloring matters of both bile and urine.

TREATMENT OF DISSECTING WOUNDS.—Dr. John H. Beach, Coldwater, Mich. (*Detroit Review of Medicine and Pharmacy*), having been poisoned by a dissecting wound, was cured through the influence of about fifteen grains of concentrated carbolic acid internally, in about eleven hours of medication. Diluting a solution of carbolic acid so that he could swallow it without much irritation of the fauces, he began taking doses equivalent to about twenty drops of the saturated solution, every half hour.

CHLORAL IN DELIRIUM TREMENS.—Chas. W. Earle, M.D., physician to Washingtonian Home, Chicago (*Med. Examiner*), having used chloral in more than fifty cases of delirium tremens, can recommend it for producing sleep. It is not as necessary, in the cases treated in this class of public institutions, to disguise the taste of the drug as in private practice. The sharp, pungent taste, to one habituated to the use of ordinary whiskey, is not particularly unpleasant. Fifteen-grain doses repeated often, until the required result is obtained, seem to give a better effect than to give larger doses. Morphine combined with chloral, in some cases, give a better result than either drug given singly. The following formula, of which a teaspoonful may be given every two hours, has given decided benefit: ℞ Chloral hydrat., ʒ ij.; Morphiæ acet., gr. ij.; Syrupi zinziberis, ʒ ij.—M.

STERILITY.—Geo. M. M'Dowell, M.D., of Barnesville, Ga. (*Atlanta Med. and Surg. Jour.*), says that observation leads him to the conclusion, that three-fourths of the cases of sterility occurring among respectable married women in this country are the result of cervical or corporeal endometritis in persons who, sooner or later, are subjects of phthisis. Nor can this sterility be regarded as a misfortune, when it is remembered that the effects of rapid child-bearing, in phthisical females, are almost invariably to hurry them to the grave.

HÆMORRHAGIC MALARIAL FEVER.—At a recent meeting of the Atlanta Academy of Medicine, Dr. Cooper, of Americus, Georgia (*Atlanta Med. and Surg. Jour.*), called attention to the value of large doses of the tincture of chloride of iron in the treatment of this variety of fever. Quinine seemed to be of little use in this disease.

SUPRA-PUBIC PUNCTURE OF THE BLADDER.—A. W. Calhoun, M.D., Berlin correspondent of the *Atlanta Med. and Surg. Journal*, extols this operation, and gives the particulars of a successful operation by Professor Langenbeck, upon a man, aged 68 years, with absolute retention of urine for 48 hours. Considering the age of the patient, and the severity of such troubles and operations upon the general system, he regards the complete recovery as somewhat surprising. This op-

eration affords at least one more chance to save the sufferer, when all others have failed, and frees the medical attendant from the mortification of seeing his patient die unalleviated.

Excision of Four Inches of Femur with Descending Ramus.—Joseph W. Thompson, M.D., Paducah, Ky. (*Richmond and Louisville Med. Journ.*), relates a case of gun-shot wound of left hip, the patient being a Confederate soldier, aged 30, in which four inches of the femur, all of the ischium, and the descending ramus of the pubes, were removed by Surgeon Fisher, of Philadelphia. The patient fully recovered. The limb is 4¼ inches shorter than its fellow, its motion is free in all directions, except abduction, in which it is slightly restricted. He can walk four or five miles without crutch or stick, and with very little inconvenience. The muscles are slightly atrophied, but regaining strength constantly. The deformity is scarcely noticeable, except the shortening of the thigh and the cicatrix on the outer side. The rectum and urinary organs now perform their functions perfectly, and the general health is perfect.

Bromide of Potassium in Epilepsy.—Dr. J. B. Cox, French Village, Mo. (*St. Louis Med. and Surg. Jour.*), reports eight cases of epilepsy, in which the attacks were cured by the administration of bromide of potassium.

Impalement of Abdomen and Thorax.—Joseph Sargent, M.D., Worcester, Mass., communicates to the Boston Society for Medical Improvement (*Boston Med. and Surg. Journal*) the results, as shown by autopsy, upon a woman who, twenty years before, when 37 years of age, had been impaled upon the handle of a pitchfork, which entered the body through the vagina, and passed to a distance of 22 inches, into and through the abdominal cavity, and, perforating the diaphragm, entered the thorax, without marked injury to any of the viscera lying in its course.

The accident occurred August 7, 1851. The patient died Dec. 29, 1871; and the autopsy was made about forty-six hours after death. The left side of the thorax was observed to be considerably more prominent than the right, and was found to be entirely filled with the proper contents of the abdomen, consisting of the stomach, the transverse colon, with a few inches of the descending colon, and a considerable portion of the small intestines. All of these had passed through an opening in the diaphragm at the left of the median line. This opening was irregularly oval, with rounded edges, and occupied a large part of the left half of the diaphragm, being about four inches in diameter. There were adhesions between the left costal pleura and the omentum. The transverse colon and a fold of the small intestine were crowding against the clavicle and the upper rib. A callus of fracture of this first rib was quite conspicuous. The heart was crowded to the right of the sternum. On removing the contents of the abdomen, a large irregular cicatrix was quite obvious in the peritonæum of the left recto-uterine *cul-de-sac*. Dr. Sargent says that he had not seen this patient for nearly three years before she died. Her death seems to have been from inflammation of the serous membranes contained in the left thoracic cavity.

Trephining in Epilepsy.—Dr. James T. Boutelle, of Boston (*Boston Med. and Surg. Journal*, February 22) records twelve cases of this operation made at the Massachusetts General Hospital since its foundation, in cases of epilepsy following depressed fractures of the skull. From this table we find that seven cases proved fatal; in four the epilepsy was cured, and one case was relieved, giving a mortality of 58.33 per cent. In most of these cases death took place shortly after the operation, from acute meningeal and cerebral inflammation, accompanied by abscess of the brain or sloughing of the membranes. In four cases the operation was followed in a short time—one hour to two days—by a rapid succession of convulsions, followed by hemiplegia and coma. He thinks the subjoined conclusions may be drawn:—1st. The operation promises a fair chance of success, and unless contraindicated by an excessively feeble state of the patient, ought always to be performed. 2d. It requires dexterity and the greatest caution on the part of the operator, owing to the fact that the membranes are frequently closely adherent to the depressed bone, and the slightest laceration of them greatly increases the chances of death. There is also much uncertainty, before making the incision, as to the extent of depression and the condition of the parts. 3d. The depressions must be entirely removed, as any projection remaining behind would nullify any benefit expected from the operation. 4th. The wound should not be closed, but kept open to allow the freest possible discharge of pus. 5th. The knowledge of the possible occurrence of epilepsy in after-life, in consequence of injury to the cranium, should, in cases of recent fracture of the skull, make the surgeon especially careful to elevate every existing depression and remove all fragments and spicula.

Abscess of the Appendix Vermiformis.—Dr. Clarkson Freeman, Milton, Ont. (*Canada Lancet*, Feb.), reports a case of abscess of the appendix vermiformis, followed by phlebitis of the left leg,—the patient being a male, aged 19 years. A free opening was made with a curved bistoury, about midway over Poupart's ligament, into the deep-seated abscess which presented a resemblance to an over-distended bladder in the right iliac fossa. This gave exit to a quart or more of fetid pus. It continued to discharge freely until phlebitis commenced in the left leg, about ten days after the opening of the abscess, when the patient suddenly felt a severe throbbing pain in the left femoral region, accompanied with rapid tumefaction of the entire limb. By constant fomentation with hops, it (the pain?—Ed.) subsided after a week or ten days, when the abscess again discharged freely and continued to do so for months, with an occasional exit of small concretions. He now enjoys good health, with only a slight enlargement of the left leg. A weak solution of permanganate of potash was occasionally injected with beneficial effect.

The Prevention of Small-Pox.—Dr. A. Armstrong (*ibid.*) advises the following means in staying the ravages of small-pox:—Persons suffering from the disease should daily anoint their bodies and limbs throughout with carbolized oil; and also wash their bodies thoroughly with soft water, slightly carbolized; the anointing to be performed after the whole person has been washed, and gently dried with some soft fabric. This process should be commenced before patients are allowed to leave their sick-room, and continued until such time as all the diseased skin has been removed, and a new and healthy one formed. In this way the particles of diseased and desquamated skin are prevented from being set free from persons who have recently suffered, and contaminating healthy persons, by being inhaled or deposited on the exposed skin, or by getting into the water or food, and thus be a mode of contagion.

Fracture of the Femur.—Dr. Frederic D. Lente, of Cold Spring, N. Y. (*N. Y. Med. Journal*, March), speaks of the different methods of treating this fracture, and

particularly of the plaster-splint, which he believes will undoubtedly prove superior to all others, in certain cases where exercise and fresh air are of special importance, and where the conveyance of the patient from one locality to another is necessary. The use of the upright bar, one of the appliances adopted by Prof. Sands in the application of the plaster-splint, he states, can not only be omitted without disadvantage, but, probably, with a positive gain in the facility and rapidity of application, and perhaps in the comfort afforded by the apparatus. By discarding the bar, the second table may also be dispensed with, provided a single one of sufficient length is employed.

According to Prof. Sands, the ordinary perineal band is a very indifferent substitute for the iron bar; but on a trial of both, Dr. Lente finds that the reverse will be found to be the fact. All the bar can do is to make an efficient counter-extension, and this can as well be done by any inelastic substance which is sufficiently strong; especially for the short time during which it is in action.

Tartrate of Iron and Potassa in Typhoid Fever.—Dr. Charles H. Gordon, Mokelumne, Cal. (*Pacific Med. & Surg. Journal*), calls attention to the use of tartrate of iron and potassa in typhoid fever—the ulceration of the intestines in typhoid being modified by its employment. He usually prescribes for an adult five-grain doses in solution twice a day, increasing the dose in the second and third week to double that quantity.

Chronic Diseases of the Respiratory Organs.—W. H. Holcombe, M.D., of New Orleans, La. (*U. S. Med. & Surg. Journal*), in his review of the work "On Chronic Diseases of the Respiratory Organs," by John Meyhoffer, M.D., states that this author is a strong advocate for the inhalation of specific medicines, including warm salt water. He approves the inhalation of carbonic acid gas diffused in an atmosphere softened by watery vapor, for which special pneumatic chambers have been built at some of the European springs. He commends it especially in bronchorrhœa with dilatation of the air-tubes and obstruction of the finer bronchial divisions with mucus, in the belief that the carbonic acid powerfully strengthens and prolongs the expiratory effort.

For syphilitic laryngitis, Meyhoffer commends the recent practice of injecting minute portions of bichloride of mercury into the cellular tissue. It is so painful, however, that morphine should be added to the solution. The same author recommends the use of selienate soda in tubercular laryngitis. He says, further, that there are two great types of the scrofulous diathesis, the *irritable* and the *torpid*. The first is lean, slender, thin skinned, with great vascular and nervous excitability, and will be improved by use of cod-liver oil. The torpid class have fatty, puffy, leuco-phlegmatic forms, and will be made worse by the use of an oleaginous remedy.

Tannate and Sulphate of Quinine.—The question of the activity of the former salt has recently been discussed in the Academy of Medicine of Paris, Messrs. Chanfard, Briquet, and others thinking that it is without activity; and M. Mialhe, the eminent pharmacologist, believing that it has some, but qualifies his views by saying that, in spite of some activity, the tannate of quinine is a detestable salt. M. Mialhe, speaking of the sulphate of quinine, makes the following observation, which is worthy of attention:

Sulphate of quinine should never be employed as a basic sulphate, but as an acid salt. In this state the sulphate may compete with all other salts the base of which is quinine; for it should be noticed that it is the quinine itself, and not its saline combinations, which is active. The acid serves only as a vehicle for the introduction of the quinine into the blood, where it is set free by means of the alkaline, or earthy bicarbonates which the blood contains, and then its therapeutic action begins. It is a mistake to believe that the sulphate of quinine, when this salt is administered, can be traced in the urine; the salts traced are the acid phosphate of quinine associated with the phosphates of lime and magnesia.

Importance of Gonorrhœa in Producing Vesical Catarrh.—Dr. Kraus, of Vienna, in speaking of his recent experience in this subject, says that the best prophylactic against catarrh of the bladder is the employment of a scientific treatment of gonorrhœa, and he protests strongly against the introduction of irritating substances into the male urethra. It is just as difficult, he says, to cure vesical catarrh, when once established, as it is easy to cure gonorrhœa. Ricord, also, says that the great majority of catarrhs of the bladder are contracted from ill-treated gonorrhœas, the extension of the inflammation taking place in the acute stage of the latter affection. The last-mentioned writer affirms that he has not met with a case in which the vesical complication has taken place in patients whose gonorrhœas were treated by his method of treatment from the outset; but as many as 80 per cent. of the cases which came to him after having been in the hands of charlatans had suffered the complication mentioned.

In the treatment of acute catarrh of the bladder Dr. Kraus disapproves the use of diuretics, stimulants, and all the mineral waters which have been so fashionable, and directs the patient to drink a quantity of distilled water. This, although it increases the quantity of urine, renders it, by dilution, less irritating. The water should be taken neither hot nor cold, and may, if more agreeable to the patient, be flavored. Tepid baths are also of great service.

Laryngoscopy.—Dr. Friber, curator of this section, and that of electricity in the General Hospital of Vienna, gives, in the *All. Wien. Med.-Zeit.* of Oct. 31st, some hints to beginners in laryngoscopy. He says that the larynx of a dog is most useful for the study of the organs when the human larynx is not obtainable for dissection. To this end Luschka's work is also recommended, on account of the plates it contains. The learner should practise much by holding the small mirror over the specimen, so as to know at a glance the different parts seen in the living subject. Common gas mixed with oxygen is recommended as the best light. Petroleum and oil lamps should be practised with, as they furnish the light often met with in the houses of patients. First of all, the beginner should become familiar with the appearance of healthy larynxes, and for this, those of hysterical women are recommended, as the sensibility of the epiglottis and pharynx is in them diminished. At first the mobility of the beginner's hand is apt to cause irritation of the throat and feelings of choking in the patient, which renders examination impracticable. When the condition of the patient's throat is responsible for this impediment, astringent gargles (tannin) may be useful; or the throat may be touched with equal parts of chloroform and tincture opii. In tender throats it is well to make the patient cry out before the mirror is introduced and pressure is made upon the uvula, after which a rapid glance may sometimes be obtained of the interior of the larynx during the first moment of tranquillity.

Trephining and Removal of a Bullet from the Cranium.—Dr. William A. Byrd, of Ursa, Ill. (*Am. Journ. Med. Sciences*), relates a case of trephining and removal of a bullet which had passed through the brain. This case, though somewhat analogous to one related by Dr. Benj. Howard in the October number of this journal, is more like the one reported by Baron Larrey. A soldier, belonging to the regiment composed of the 1st and 4th Missouri Confederate Volunteers, was wounded at the battle of Champion's Hill, Mississippi, May 16, 1863. When the surgeon having charge of the ward examined the patient he pronounced the wound of the forehead over the right eye a contusion produced by a fragment of shell. He was afterwards moved to a hospital at Clinton, Mississippi, that was in charge of a Dr. Hunt, of Louisiana, who, while examining the patient's head, ten days after he received the injury, discovered a spot a little to the right of the occipital protuberance that was painful to the touch. This led him to examine more carefully the wound of the forehead, when he found that the frontal bone had received a fracture of both tables. Passing a probe in at the wound, he found that it passed to the back part of the head, where it met a hard convex substance. This having settled the diagnosis, Dr. Hunt, with the assistance of the hospital staff, trephined over the supposed site of the foreign substance, and found a large conical leaden bullet, much roughened by its passage through the frontal-bone. Dr. Byrd, several times in 1864, saw the patient doing duty as a soldier with his regiment. He made no complaint of his head bothering him except when marching under a hot sun, which he said caused him to become dizzy, with a heavy headache.

Nitrite of Amyl.—A. B. Lyons, M.D., Prof. of Chemistry in Detroit Medical College (*Detroit Review of Med. and Pharmacy*), in speaking of this remedy, first discovered and described by M. Balard, in 1844, remarks that many cases of asthma are reported in which instantaneous relief of the distressing symptoms has followed its administration. Dr. Connor, of that city, reports several instances of this kind in which he has made trial of the remedy—always with the happiest effects. In a case of hemicrania, attended with contraction of the pupil of the affected side, and probably due, according to Du Bois-Raymond, to tetanic contraction of the arterioles and capillaries of the affected part, the attacks, which had usually lasted through the day, were cut short, and no unpleasant after-symptoms were produced. As a remedy in tetanus the nitrite has, in several instances, appeared to meet the indications, its use being followed by recovery. It is ordinarily administered by inhalation. Five drops, poured upon a handkerchief and held to the nostrils, will speedily bring the patient under its influence. The characteristic reddening of the face, or the acceleration of the pulse, serves to indicate that the drug has produced its effect, and the handkerchief should be at once withdrawn. The dose may be repeated, if necessary, after a short interval.

Removal of an Inverted Uterus.—Dr. Thomas Hay, of Philadelphia (*Med. and Surg. Reporter*, Dec. 2, '71), publishes a case in which an inverted uterus with an intra-mural fibrous tumor of the fundus was successfully removed by *écrasement* from a married woman, aged 32 years. The entire mass removed weighed one pound avoirdupois, less one quarter-ounce troy, and measured in length 6½ inches; in circumference, at the thickest part, 12 inches; and around the neck 8½ inches.

Hydrophobia.—Dr. A. J. Murray, of Detroit, Mich. (*Detroit Review of Med. and Pharmacy*), in publishing a case of hydrophobia occurring in a horse, remarks that many surgeons recommend excision of the bitten part; but if a caustic is applied *immediately* after the wound is inflicted, there is probably no more effectual way of preventing the development of the disease. The late Mr. Youatt, of London, England, had many opportunities of observing cases of rabies, and, while thus engaged, he was repeatedly bitten by rabid animals; in such cases he always applied nitrate of silver to his wounds, and with the constant result of preventing the development of the disease in his own system. The recoveries which one frequently hears of in cases of hydrophobia are either mere inventions, or they are the result of an error in diagnosis. He says that it is unfortunate that such stories should obtain currency, as they are apt to make persons who have been bitten by rabid animals dilatory in applying to a surgeon, when immediate treatment is of the utmost importance.—[The accuracy of Mr. Youatt's statements regarding the number of times he had been bitten by *truly rabid animals* has been questioned.—Ed.]

Pepsin.—Dr. Lionel Beale has recently contributed an article to the *Medical Times* (Eng.) on this substance. He says that much of the loss of reputation of this remedy is owing to the extensive sale of entirely useless preparations. Experiments made and published by him several years ago demonstrated that by far the best form of pepsin is obtained by scraping the mucous membrane of the pig's stomach after it has first been lightly cleansed with a sponge and a little water; the mixture obtained, of mucus, gastric juice, and epithelium, being dried on glass plates at a temperature not exceeding 100° Fah. When dry the mucus is to be separated from the glass, powdered in a mortar, and carefully sealed in a well-stoppered bottle.

Of this powder 8 grains, with ten drops of hydrochloric acid, and an ounce of distilled water, is sufficient to dissolve 100 grains of hard-boiled white of egg in from twelve to twenty-four hours. This powder retains its activity for an indefinite period, if kept dry, and a solution of it is nearly tasteless and inodorous.

When administered as a medicine, from two to five grains may be given at a dose, a little dilute hydrochloric acid in water being taken at the same time. The pepsin powder may be mixed with the salt at a meal.

In 1857, Dr. Pavy found, as a result of careful examination, that the dried mucus of the pig's stomach was the most active of all the preparations of pepsin sold (*Med. Times and Gaz.*, vol. i., p. 336), and in 1863, a still more careful examination by Prof. Tuson (*Lancet*, Aug. 13th, 1870) demonstrated that this preparation was *twenty-five times stronger than some others that he obtained for examination.*

Hydrochlorate of Narceine for Hypodermic Injections.—Dr. Petrini, in the *Bulletin de Thérap.*, advocates this salt as being, for this purpose, superior to sulphate of atropine or muriate of morphia, its calmative power being manifested by so small a dose as from five milligr. to one centigr. When all other preparations of opium have failed as hypnotics, a small dose of this salt of narceine has succeeded. Even in the smallest doses it causes a slight rise in the temperature, and increased frequency of both pulse and respiration with diminished arterial tension.

Abortive Treatment of Erysipelas with Silicate of Potash.—Dr. Piazza recommends, as a local means of effecting the cure of erysipelas, the application of a somewhat concentrated solution of silicate of potash, which should be painted in two or three successive layers on the part affected.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE AMERICAN MEDICAL ASSOCIATION.

The recent meeting of the American Medical Association was the largest ever held, the number of registered members in attendance—upwards of seven hundred and twenty—exceeding by more than one hundred that on any former anniversary. Above thirty states and territories were represented, and we noticed strong delegations from the South and the remote West. Observing the good feeling that prevailed, we could not but admit, with the President in his address, that the Association is eminently useful in cultivating fraternal sentiment throughout the country, whatever other claims to eminence may be denied it. The members had evidently come together with intent to enjoy the occasion, and the Committee of Arrangements, and the citizens of Philadelphia generally, had spared no effort to surpass their anticipations. Hospitals, museums, clubs, and private residences were thrown open; and an elegant little manual of the objects of scientific and artistic interest in and about the city had been specially prepared for their use.

But when we leave the social aspect of the convention, and consider it as a body claiming to represent the status of a learned profession in this country, we are alternately humiliated and amused. That a national society, a quarter of a century old, should have grown no more mature than to spend the whole of its general sessions not in listening to scientific addresses, not in discussing scientific problems, but in petty squabbles over its Code of Ethics, and in wild efforts to give its *Transactions* an appearance of manly strength and dignity, when its meetings are devoted to child's play —is not consoling to us as a member of the medical profession of America. But when such a body assumes to dictate a scheme "to be recognized as the only system of medical instruction in this country," and to demand that college charters be granted and revoked in accordance with it (Report on Education), the notion is so supremely absurd that we are put in good humor again.

It is strange how the men of real culture and power in such an assembly are dragged down by the dead weight of its average ignorance and imbecility. *Vox populi, vox Dei* has been a spell to lead even statesmen to sacrifice their best thought to the supposed wisdom of majorities. Is it the same potent spell which compels the President of the American Medical Association, in an address whose every sentence proclaims the elegant scholar, to ask of German culture, "What has it all amounted to?" to doubt whether we have not, after all, laid rather too much stress on the "accomplishment of spelling;" to see no other aim than that of "rugged utility;" and to counsel us not to get too far in advance of the people, lest they fail to appreciate us?

Having disposed of the educational question, the Association addressed itself to the reform of our medical literature. We await with curiosity the appearance of its model journal, under editors elected annually by a convention so discriminating, and under a business management doubtless as frequently changed—for the journal must be free from all trammels of obligation to a publisher (Report on Literature). Perhaps it will take at once the place predicted for it, and eclipse those journals which have established a reputation by years of patient effort. At least, a practical editor was forced to take that view, when he found himself a mouth-piece of the Association as Chairman of its Committee on Medical Literature.

It is well that the Association appreciates its own merits, and we highly approve its proposition to vote itself a medal, though the distinguished honor of membership will never be fully understood, except by those who know the severe ordeal delegates have to pass at the time of their election. We would suggest a design: On the obverse, a railway train of Young American doctors rushing toward the log-built station of "Rugged Utility," while a mild-faced German, in spectacles, is vainly endeavoring to put on the "brakes" (Report on Education); books, paintings and statues being flung madly from doors and windows; inscription (not over-carefully spelled)—"Away with learned lumber" (President's address). On the reverse, the Editor of the National Medical Journal, standing on the dome of the National Academy of Medicine, gazing fixedly into heaven; inscription—"Æsthetics, morals, and the higher life" (Report on Literature).

On the question of recognizing woman's place in the profession, the Association manifests the same illiberal spirit which has characterized it heretofore. The first ground assigned by its Committee on Ethics for the exclusion of delegates Palmer and Reyburn, in a Report endorsed by an overwhelming vote, is that they are connected with a college which admits female students and employs a woman teacher. The Association

refuses to recognize that this question is practically settled, and continues to pass resolutions and make decisions as if it expected the country to respect them. It ignores the fact that the rule applied in the case of the Washington delegates would equally exclude the representatives of the Medical Society of the County of New York, and those of the New York Pathological Society, both of which have women as members; that it would exclude those of every Medical College of this city, since the College of Physicians and Surgeons, the Medical Department of the University of New York, and the Bellevue Hospital Medical College, have each one or more of its Professors, and one of them its President, on the Examining Board of the Woman's Medical College of the New York Infirmary; that it would exclude those of Bellevue Hospital, and of every other Hospital under the Department of Charities and Correction, since these all admit women to their clinics. In view of these facts, it strikes us that the women will not be sorely disheartened by the action of the Association. Though not granted a voice in its counsels, they are still likely to make themselves heard. We believe the RECORD was the first medical journal in which they appeared as contributors. The readers of its earlier numbers will recall the series of brilliant letters from Paris (signed P. C. M.), which, they may be interested to know, were by the same able hand that lately furnished the exhaustive article on Septicæmia and Pyæmia. Its columns will always be open to every regular physician, male or female, who has matter to present coming up to its standard of merit.

The report of Dr. Logan on a National Health Council presents some admirable suggestions which we have no space to enlarge upon today. We must leave untouched also several other topics that we had hoped to mention—among them the U. S. Marine Hospital Service, whose growing importance we were glad to see recognized by the proposition to place it, in the Association, on a par with the Medical Departments of the Army and Navy. We notice, in a recent Report, that it is maintaining an average of about eleven hundred patients, at a daily cost of something less than one dollar per head.

NATIONAL MEDICAL LIBRARY.

THAT the United States should possess one Medical Library as complete as can now be formed, and that such a library can only be collected, cared for, and continued, as it should be, under Government auspices, are propositions which need only to be fully understood to be accepted. Such a library should contain every book, journal and pamphlet relating to medical and sanitary science and its history, from the imperial folios of Anvert and Mascagni to the last hand-bill of the Board of Health of each city where such an institution exists; or even to the pamphlet which sets forth the virtue of Smith's Liver Persuading Pills. It must be able to show the bad as well as the good; the folly and knavery as well as the wisdom and benevolence of mankind must be made matters of record. As stated by Edwards: * "The trash of one generation becomes the highly-prized treasure of another. What a Bodley, at the end of the sixteenth century, calls riff-raff . . . which a library keeper should disdain to seek out . . . a Bodley's librarian has to buy amidst keen competition, and almost for its weight in gold, at the beginning of the nineteenth."

Such a library must be a growth, and not an accretion; its formation is not a mere question of money, but an addition of time, labor, and knowledge.

The formation of such a library for this country has at last been undertaken, on a plan and under management which makes it almost certain that its progress will be uninterrupted; and every physician in the country should not only know of the existence of such an institution, but should consider it both a duty and a privilege to contribute to it, for preservation and reference, any additions which he may make to the literature of his profession.

The library of the Surgeon-General's Office at Washington is in reality a part of the National Library of the United States, but is wisely left under the superintendence of the Medical Department of the Army, as best fitted by inclination, knowledge, and opportunity, to make it what it should be.

Mainly the growth of the last eight years, it already numbers over 16,000 volumes, and it is to be hoped that that number will soon be doubled. The catalogue before us is a handsome octavo of 454 pages, 431 of which are taken up with the titles of books, under the names of authors, followed by 23 pages of an alphabetical index of subjects.

The titles and description of books are more full than is usual in such catalogues, the number of pages and plates, and the name of the publisher being given, in addition to the usual information of place and date.

It is a matter of course that if a library of this character could be formed at one of the great centres of medical education, as New York or Philadelphia, it would be a preferable location; but it is equally certain that this is impossible, and that if this country is ever to possess a library to correspond with those of England, Germany, and France, it must be, like those, a national library, at the seat of Government, supported by Government appropriations, and managed by its officers. The Medical Department of our army has done and is still doing good work for the profession at large; and this task of forming a medical library for the country, which it has undertaken, will in future years be looked upon as one of the most valuable of its works. Three years ago the project was started of forming a library for the American Medical Association. We do not know what progress has been made

* Edwards' Memoirs of Libraries, vol. II., p. 570.

in this; but we believe it would be good policy on the part of the Association to turn over to the Library of the Surgeon-General's Office whatever collection it may have made, and to use its influence to add to it the future publications of its members.

THE PHARMACY BILL.

THE Weismann Pharmacy bill, of which we have spoken so much, has at length passed both houses of the State Legislature, and only awaits the signature of the Governor to become a law. The pharmacists, whom this law will affect, are under many obligations to Senator WEISMANN, of this city, and Assemblyman LOUGHRAN, of Ulster, for their efforts in bringing about this desirab'e end.

OUR THIRD DOUBLE NUMBER.

THE full report of the American Medical Association, prepared by DR. JOHN WINSLOW, of our staff, compels us to make this issue a double number, and accounts for the slight delay in its appearance.

Medical Items and News.

ON THE TREATMENT OF PULMONARY CONSUMPTION BY HYGIENE, CLIMATE, AND MEDICINE, IN ITS CONNEXION WITH MODERN DOCTRINES. By JAMES HENRY BENNETT, M.D., Member of the Royal College of Surgeons, late Obstetric Physician to the Royal Free Hospital, etc., etc. Second edition. New York: D. Appleton & Co. 1872. Pp. 190.

THIS work continues to command the attention and interest of the profession and of pulmonary invalids. The peculiar circumstances under which it is written have much to do with this. The author, in 1858, being then 42 years of age, in the enjoyment of a large London practice, and very favorably known as the author of a standard book on uterine diseases, developed phthisis, which in a few months became so aggravated that marked emaciation, debility, hemorrhage, and hectic fever seemed to indicate an early close to his career. Abandoning business, he sought recovery, in winter, on the shores of the Mediterranean, and in summer by the mountain lakes of Scotland; changing his home with the seasons like the birds of passage. He found what he sought—through the agencies which he enumerates upon his title-page, in the order of the value which he assigns to them. His case has been made by himself and his friends so conspicuous, that now for a long time, his engagements both in London and at Mentone, are much more in the way of consultations in cases of pulmonary than of uterine diseases. Indeed, much more than any one else, he has contributed toward founding that colony of consumptives from every land, which every winter peoples the Mediterranean shore from Nice to Pisa.

Here he finds the largest opportunity for studying the disease in all stages and in all types of civilized humanity. Thus his high professional position, his well-interpreted personal experience, and large clinical observation, unite to command for him an earnest and respectful attention.

The animus of this book is a strong protest against the German and French views of this disease, which, beginning in the pathology of Virchow and his school, issues in the therapeutics of Niemeyer and kindred authors.

He thus sketches the differences between the British and continental schools, taking Virchow and Bennett of Edinburgh as the exponents of each respectively. Virchow declares that tubercle is a *cell-proliferation* from the connective tissue, or some tissue allied to it, having for its exciting cause a formative irritation (inflammatory), extended to the connective tissue from a bronchial catarrh or an acute pneumonia. Bennett affirms that tubercle is an *exudation from the blood-vessels*, incapable of resolution by the microscope into cells; becoming a molecular blastema, and infiltrating the connective tissue; and that its first condition is a depraved state of the blood itself, resulting from imperfect assimilation, or any other cause which may depress the vitality of the subject. To the German school the disease is local; essentially inflammatory, a chronic pneumonia, or a scrofulous abscess. To the British it is a caco-plastic dyscrasia, whose products are prone to suppuration, but in its essence, as well as by its morbid products, a factor of decay in tissues and in vital power. The different pathologies are represented in the differing therapeutics. One combats local disease by rest, recumbency, depressants, revulsives, and anodynes; the other improves general health by all methods included under the widest meaning of hygiene, and medicinally supplements or corrects deficient or perverted functions. To the British view the author adheres with the fullest conviction. He has taken for his motto, "Medio tutissimus ibis," but his own words present him at the extreme of this idea. On page 118 we find: "Every year's clinical experience increases my firm conviction that in treating pulmonary phthisis we have not to deal with a mere local inflammatory disease, but with a constitutional diathesis, a condition of lowered general organic vitality, which manifests itself by a local pathological condition quite foreign to ordinary inflammation, whatever be the histology of the minute morbid processes. To cure pulmonary consumption you must reach the constitution, vitalize the general organism, improve the digestive functions, and thereby nutrition. All local treatment is useless, or worse than useless (sic); all medicines given as a panacea, as an antidote, are vain, nugatory. No therapeutical measures, directed to modify the coexisting bronchitis, arrest or ameliorate the actual disease; no counter-irritation or local depletion arrests or ameliorates the chronic pneumonic conditions existing around the softened lung deposits, although they may ease pain and delude the patient and attendant into the belief that good is being done."

This, we think, is one-sided, and, in a certain measure, conflicts with the general judgment of the profession. He is more just and happy in other parts of the essay. From the chapter on prognosis we extract an illustration which is graphic as a picture, and yet bears truth in every line:—

"I often familiarly compare the lungs attacked with phthisis to a large house on fire. The fire may begin in the servants' rooms or garret—that is, at the top of the lung, the most frequent original seat of deposit. If it can be put out before it has extended to the story below, but little inconvenience is afterwards experienced by the owner of the house. He can live very comfortably in it under ordinary circumstances, only feeling that there is less room than formerly on extra occasions, such as visits from friends. If the story below, or the two stories below are destroyed before

the fire is put out, he feels more or less inconvenience in his daily life; but still he can get on. But when all the house is destroyed except one room or the cellars, it becomes quite impossible for him to live in it by any amount of contrivance. Moreover, it is all but impossible to save even that one room when the fire has reached this stage."—P. 128. The book is not written in the best style of English composition, and is open to the more grave censure of appearing to be addressed quite as much to the patient as to his medical adviser. Thus the preface is full of a senile dogmatism, which does not go so far with the profession as with the laity, and is boldly furnished with the business card of the author:—

"Grosvenor Street—May 15th to Oct. 15th.
"Mentone—In the Winter."

Still, we believe his opinions coincide in the main with those of American physicians, whom he recognizes by quoting Prof. Flint, Sr., and the late Prof. G. T. Elliot.

C.

FECUNDITY, FERTILITY, STERILITY, AND ALLIED TOPICS. By J. MATTHEWS DUNCAN, A.M., M.D., L.R.C.S.E., F.R.C.P.E., F.R.S.E., Lecturer on Midwifery in the School of Medicine, Physician for Diseases of Women in the Royal Infirmary, Physician to the Royal Maternity Hospital, Consulting Physician to the Royal Hospital for Sick Children, formerly Examiner in Midwifery to the University of St. Andrews, Corresponding Member of the Royal Society of Physicians of Vienna, Honorary Fellow of the Obstetrical Society of London, of the North of England Society, of the Gynæcological Society of Boston, of the Medical Society of Norway, of the Hunterian Medical Society, of the Obstetrical Society of Louisville, etc., etc., etc. Second edition, revised and enlarged. New York: William Wood & Co. 1871.

HAPPILY we have in the United States, as well as elsewhere, a fair and rapidly-increasing proportion of men whose calibre enables them to appreciate the fact that one can be a safe and self-respecting practitioner only in so far as he makes himself a painstaking and devoted scientist. For such, the work before us will possess a unique value. It covers ground hitherto untilled. Garnered in its pages the student will find a rare fruitage of facts, data, and arguments. Though unpractical and impertinent in the sight of the mere pill vender, the book will be welcomed by the scientific physician as a singularly practical and pertinent addition to his *repertoire*.

During the year 1855 there prevailed throughout Scotland a system of compulsory registration more exact and elaborate than any that has been known to the profession before or since. This resulted in the aggregation of a mass of statistics of appalling scope, variety, and abundance. Here Dr. Duncan found the principal materials for his book. One hundred and thirty-one tables that he has constructed and distributed through his work, attest the generalship with which he has marshalled under the banner of science, a vast rabble of inchoate data; while five hundred pages of vigorous English quite reconcile the reader to even such a formidable array of statistics.

The topics under discussion are ten in number, namely: The variations of the fecundity and fertility of women according to age; the weight and length of the newly-born child; some laws of the production of twins; the law of the fertility women; some laws of the sterility of women; note on the formulæ representing the fecundity and fertility of women (by Prof. Tait); the mortality of childbed, its amount as affected by the number of the labor, the age of the mother, etc.; the age of nubility; the doctrine of the duration of labor; the duration of pregnancy. It is impossible to give a satisfactory synopsis of a work which is itself a synopsis of the canniest sort. Instead, we print a few suggestive excerpts.

"By fertility or productiveness I mean the amount of births as distinguished from the capability to bear. This quality of fertility or productiveness is interesting chiefly to the statistician or the political economist. When a population is the subject of consideration, it does not even involve the capability of every individual to conceive or bear, nor even the conditions necessary for conception. By fecundity I mean the demonstrated capability to bear children; it implies the conditions necessary for conception in the women of whom its variations are predicated. This quality of fecundity is interesting chiefly to the physiologist and physician. In short, fertility implies fecundity, and also introduces the idea of number of progeny; while fecundity simply indicates the quality, without any superadded notion of quantity."—p. 3.

"Puerperal fever, or metria, is to me a hot-bed of false and insufficient hypotheses. I do not believe there is any such single disease. The term includes a variety of diseases, and a variety of modifications or terminations of diseases. It is familiarly described as a zymotic disease. It is described universally as occurring in epidemics, not merely as an endemic. I feel certain, and believe I can prove, that an epidemic of puerperal fever never occurred—that no accepted definition of an epidemic can be made to include metria."—p. 353.

"Puerperal fever may have its root in an otherwise insignificant perineal laceration, as well as in a phlebitis or endo-metritis."—p. 326.

"Not fewer than 1 in every 120 women delivered at or near the full time, die within the four weeks of childbed."—p. 302.

"1st *Proposition*. The mortality of women in parturition and childbed increases with the increasing duration of labor (in an undetermined ratio).

"2d *Proposition*. The duration of labor is only an inconsiderable item among the many causes (single or combined) of the mortality of women in parturition and childbed."—p. 401.

"I can find no ground for the awful suspicion that well-managed hospitals have caused a large, unnecessary, or avoidable mortality, or developed diseases previously unheard of."—p. 362.

"In depreciation of data derived from private practice, it is to be remembered that medical men are mortal, and have an indisputable tendency and an inalienable right to say nothing of what looks like want of success. Suspicion naturally attaches to data remarkable for apparent success. This does not arise from any doubt as to veracity, but from the probability that practice, having apparently remarkable success, is published on that account. If the data of private practice could be got, they would be the best."—p. 296.

"Much mischief is done by the veil thrown over the subjects we are treating. Young women of the better classes know really nothing of the suffering they may expect in marriage, beyond the fact that some of their friends die in childbirth. Novels do not, and ought not, to tell them of the weary months of pregnancy, with infinite petty, almost degrading ills, nor of the weary years of ill health passed by thousands who escape the risk of immediate death. Married women keep their counsel only too well. Young men are almost as ignorant as their young wives, who, at a

moment when their imaginations are fired by all that romance and youth can promise, when their daily lives shine with a light darkened by no cloud of evil and mistrust, from this great happiness often pass to a state of bodily and mental degradation, of fretfulness, worry, and vexation. What wonder if the young woman fancies she has awakened from a happy dream to face a harsh reality? What wonder if she resents as a lie the romance of chivalry so lately told and heard in perfect faith? What wonder if the husband becomes repulsive, and the word of love a mockery?

"The husband in his turn, bewildered, ignorant, fears that a veil has fallen from his eyes, and that he now sees in the peevish, discontented woman before him the true form of the goddess he had worshipped. Would it not have been better for that young woman and man to know what child-bearing meant? Possibly they would never have married. Better so, then. Better still, if knowing the trials before them, they met them bravely—she prepared to suffer, and he prepared at the expense of self-denial to spare her suffering. Some may fear that poetry and purity would vanish before knowledge; but love is no lie. Knowledge of vice may render love impossible; knowledge of pain will not render love less pure."—*Review*, p. 272.

"In a science like medicine, where so little is capable of absolute demonstration, ancient traditions, especially if supported by the opinions of the great and wise, are among the most valuable and trustworthy guides of practice."—p. 412.

"Had we more numerous and more carefully collected data, based upon a system of counting from the beginning of menstruation, I should be ready to give up the old one and take the new one. Both systems yield the method of calculating on purely empirical, not on rational, grounds. Authors have committed grievous errors in vainly trying to combine empirical and rational grounds for this calculation. In the present state of science this is impossible."—p. 447.

"Authors have yet to prove that residence in well-arranged towns and hospitals is insalubrious. They have yet to prove that mere aggregation is, *per se*, pernicious in its influence. If such be the case, then no measures can avert the evils of town or of hospital residence. For my part, I believe that even now we know how to make a town or an hospital as healthy as any other place, if the condition of over-crowding is prevented."—p. 365.

EARTH AS A TOPICAL APPLICATION IN SURGERY: Being a full exposition of its use in all the cases requiring topical applications admitted in the Men's and Women's Surgical Wards of the Pennsylvania Hospital during a period of six months in 1869. By ADDINELL HEWSON, M.D., one of the attending surgeons to the Pennsylvania Hospital. With four Photo-Relief Illustrations. Philadelphia: Lindsay & Blakiston. 1872.

THIS work consists of some ninety-two carefully recorded cases, illustrating the various wounds and surgical accidents which are constantly observed in the wards of a large hospital, and upon which this mode of dressing has been carefully carried out; together with the various theories which may be deduced in explanation of its *modus operandi*.

No matter how prejudiced one may be at first with the idea of covering up a mutilated limb with earth, or filling the cavity of an abscess with this material, and even the vagina after the operation for a vesico-vaginal fistula, or the removal of uterine polypi, he will have to admit that our author clearly shows that earth is a valuable adjuvant in surgical dressings.

In the cases which are here reported, with but some few exceptions, this dressing appears to prove what Dr. Hewson claims for it, viz., that it relieves pain, promotes union of wounds, while it not only lessens suppuration, but is also a deodorizer as well as a disinfectant.

That a fair trial has been given it in the wards of the Pennsylvania Hospital, under Dr. Hewson, is very evident, and that, too, as we have been informed, under some very adverse circumstances, such as great antipathy on the part of patients, and ridicule on the side of medical *confrères*.

One case cited shows that the earth did not suffice to keep the wound free from maggots, but this the doctor believes was due to want of proper attention on the part of attendants; their not keeping the parts sufficiently covered with dry earth. In this case even carbolic acid did not prevent the formation of maggots. In a case of which we are cognizant, where the earth was applied to a foul ulcerating surface, even with the closest attention on the part of the attendants, maggots were found to infest the sore. These, however, were at once destroyed by the use of carbolic acid, when the earth then served as a most agreeable dressing to both patient and surgeon.

This work should be read with care on the part of those who have much to do with the treatment of wounds, and a careful trial of the method proposed, especially by those who are engaged in hospital practice, should be made.

With reference to the theories that are brought forward to show the *modus operandi* of this treatment we have not space to enter upon a discussion.

In conclusion, we warmly recommend this book to the practising physician as well as surgeon, and believe that to Dr. Hewson we are under great obligations, for the agreeable and careful manner in which he has introduced this treatment to the notice of the profession. Should the same success follow this mode of practice in the hands of other surgeons, as it appears to have done in those of Dr. Hewson, Prof. Lister and carbolic acid will find no small rival in Dr. Hewson and his earth-dressing.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 10, 1872.

DR. A. L. LOOMIS, PRESIDENT, in the Chair.

RUPTURE OF BLADDER.

DR. JANEWAY presented, on behalf of Dr. Gouley, a specimen of rupture of bladder. The following is the history of the case prepared by Dr. Ranney.

James Kane, æt. 30, farmer, had been taken with pains in the abdomen, for which he was sent to New York for treatment. On admission, was suffering from intense abdominal cramps, which prevented an erect posture. Said he had been unable to make water for two days previous to admission, but had had his urine drawn from him by a friend. Decubitus was dorsal, with legs and thighs flexed. Eight ounces of urine were drawn off by a catheter shortly after admission. Afterwards Dr. Gouley introduced first a Thomson's searcher, by which he only drew off four ounces. Afterwards, by pressure and the use of a No. 6 catheter, two pints of dark-colored, bloody urine were drawn

off, and the bladder still remained unemptied. A pint was drawn off every two hours afterwards, till eleven pints had been obtained.

Symptoms of peritonitis, more marked than before, appeared next day; vomiting, tenderness, anxious face, etc. Seven and a half pints of urine were drawn on that day. On the third day three and a half were drawn, and a good deal escaped in the bed. The patient grew weak, and died at a quarter to ten o'clock on the morning of the third day after admission.

Examination of the urine showed seventy-five per cent. of albumen in bulk; hyaline casts in large number; pus globules, renal and vesical; epithelium and blood-globules in great abundance. The details of the history are from a record taken by Dr. Ranney, house surgeon. The case was in Dr. Gouley's division, and I present it at his request.

Autopsy.—All the organs normal except the peritonæum and the genito-urinary organs. The peritoneal sac showed extensive lymph exudation, with agglutination of intestines; and in the pelvic cavity a large quantity of urine. The bladder was contracted, empty, and a large rent was found slightly to the right of the median line on fundus and on the posterior aspect. This was capable of admitting two and a half fingers; was ragged on its edge and crucial in form. The posterior surface of the bladder was covered by a thick layer of exudation. Urethra was normal, prostate was normal, and no calculus was found in the bladder. The mucous membrane of the bladder presented no marked evidences of inflammation. Ureters pervious. Congestion of one was marked, and in the other spots of incipient interstitial nephritis were present.

Dr. Janeway remarked that the bladder might have been ruptured in consequence of a jump from some high place while that organ was distended. He had known of a case of that sort where the rupture was in that locality. The fact that the patient refused to give any previous history of his case led to the suspicion that he might have been engaged in a burglary which might have necessitated such a supposed leap.

TWO CALCULI, EACH WITH FIVE FACETS.

Dr. Post presented two calculi removed by lithotomy from a boy aged seven. The peculiarity of the specimens was that each one had five polished surfaces, which might have led to the suspicion of the presence of others. One weighed forty-one and a half, and the other thirty-nine and a half grains. The bladder in this case was markedly enlarged.

Dr. Jacobi asked if Dr. Post had any reason to suppose that a large majority of such cases were of congenital origin.

Dr. Post was unable to answer the question, although he had met with a case between three and four months old.

RENAL CALCULI THE CAUSE OF SCREAMING-FITS IN INFANTS.

Dr. Jacobi had operated as early as eleven months, in one case, and as early as nineteen months in another. In one of these the symptoms of stone dated from the earlier months of infancy. The frequency with which stones were found in the kidneys of new-born infants would lead to the conclusion that the origin of calculi was, if not congenital, confined to the earlier weeks of infancy. In forty post-mortems upon children under six months, made in succession, there were calculi in the kidney in six. He remarked that the violent screaming-fits met with in young infants could often be accounted for on the supposition of the passage of a renal calculus. He had met with two such cases; one he had known to have had several of such screaming-fits, and in the other the stone was cut out and was found to have a very large nucleus of uric acid, pointing most unequivocally to its renal origin.

CEREBRO-SPINAL MENINGITIS.

Dr. Whithall presented a specimen of cerebro-spinal meningitis with the following history:—

N. S., aged 19, laborer, native of S. C., negro, was admitted to Colored Home Hospital, March 23, 1872. Previous health and habits good. With the exception of small-pox and ordinary diseases of childhood, has not been confined to his bed by any illness until the present attack. On Monday, the 18th, was seized with severe pain in right leg above the knee, which compelled him to go to bed. This pain continued till Wednesday, the 20th, when the left thigh was similarly affected. Shortly after this the pain travelled upward and settled in the back of the neck and the head. On admission, the patient was slightly delirious, and his statements were somewhat conflicting and incoherent. It is uncertain whether he vomited previous to entering the hospital, though he was positive he had chills once or twice. He complained of feeling cold, and had a marked rigor; the slightest movement gave him intense pain, which he located on the head and back part of the neck; was exceedingly restless, intense thirst, slight cough, tongue coated with moist white fur, pulse 85, resp. 20, temp. 99.5°, pupils moderately dilated, but responded to light; heart and lungs healthy. Urine amber in color, reaction acid, sp. gr. 1014; no albumen; bowels constipated; no eruption visible; patient almost black. Diagnosis, cerebro-spinal meningitis.

Treatment.—U. S. Sol. Morphine ℥ i. every hour until some effect was produced; nourishing diet.

24*th*. Condition about the same; blister to nape of neck and cathartics. Decubitus generally upon the back, sometimes upon the side, head at times very slightly retracted. 26*th*. Chill this morning at 9 o'clock; pain continues; general condition unimproved. Bowels moved by the carthartic. 27*th*. Has slept some, takes nourishment well. Treatment continued. 28*th*. Slept some during the night; slightly delirious. 29*th*. Delirium increased; voluntary discharge of urine; still complains of pain in the back of neck; tongue heavily coated; eyes suffused. 30*th*. Restless night; got out of bed and walked up and down the ward, and said he wished to hang up some hams. Is lethargic, eyes wide open; when aroused to answer, says he is free from pain; takes his nourishment poorly. Treatment continued. 31*st*. In about the same condition. In the evening, erysipelas noticed, beginning upon the bridge of the nose. Ordered sol. plumbi et opii, and tinct. ferri chlor. and quiniæ sulph., internally. Morphine continued. Pulse 108, resp. 32, temp. 102°. *April* 1*st*. Lethargic. Erysipelas spreading; morphine discontinued. 2*d*. Passed a quiet night; feels better, not so lethargic; no farther spreading of erysipelas; resists his food; more rational. 3*d*. Erysipelas improving; general condition as at last note; ordered milk punch. 4*th*. Condition improved, some hiccough, vomited early in the morning, is rational, free from pain, erysipelas disappearing. 5*th*. Slight delirium, of a low, muttering character. 6*th*. Quite lethargic; passes urine in bed; bowels have not moved since the carthartic; ordered an injection. Pulse 80; resp. 26; temp. 100½°. Pupils moderately and irregularly dilated, the right the largest; sluggish; subsultus tendinum, picking at bed-clothes. Morphine reduced to ℥ i every two hours. 7*th*. Delirious; evacuation of bowels from injection, takes a moderate amount of nourishment. Urine amber, acid, sp. gr. 1024; no albumen. P.M. Lethargic, eyes staring, breathing somewhat stertorous, with collapse of alæ

nasi during inspiration. Morphine every 4 hours. *8th.* Patient comatose; breathing regular and quiet, eyes widely open and suffused, pupils widely dilated and immovable, the left the widest; now and then low, muttering delirium; pulse irregular. The body is held rigidly straight when an attempt is made to elevate the patient, and his cries give evidence of the great pain it causes.

9th, 2 P.M. Comatose, breathing labored and partially stertorous, pupils irregularly dilated and immovable, the left the largest, occasional groan, pulse 140, very irregular, eyes widely open, slight subsultus. 7 P.M. Coma deepening. Death at 10 P.M.

Autopsy, 17 hours after death; marked rigor mortis. Weights of organs: brain 41½ oz.; liver, 34¾ oz.; right lung, 18¾ oz.; left lung, 12 oz.; right kidney, 4½ oz.; left kidney, 5 oz.; heart, 9 oz.; spleen, 3½ oz.

Brain—arachnoid unusually dry; pia mater and brain-substance somewhat injected; a few dots of lymph noticed on convex portion; at base of brain an extensive deposit of recent lymph was found upon the extreme upper portion of medulla oblongata, pons Varolii, and optic commisure. It also extended a short distance along the Sylvian fissures, between the cerebellum and brain, and between the former and the spinal cord. The ventricles were distended with transparent serum, and the surrounding parts slightly softened. The septum lucidum, fornix and thalami optici were much softened, and there was considerable lymph, yellowish and translucent, extending from the floor of the ventricles into the different cornua. Exudation most abundant on right. The greater portion of the medulla and the spinal chord were free from inflammatory products. The pia mater was somewhat congested, and the arachnoid perhaps a little less moist than normal. Near the upper end of the cervical region on the left side was a small patch of lymph, and on the posterior and lower portion of the cord were a few small, irregular, translucent whitish patches resembling thin sections of cartilage, and of exceedingly firm consistence. The upper surface of these masses was flat, the lower surface bulging and irregular. They evidently sprang from the visceral surface of the arachnoid, but this membrane was not adherent to the cord; nor to the dura mater at the affected points, nor was there undue thickening or vascularity around the patches. The falx cerebri contained a small calcareous deposit; the sinuses were filled with dark venous blood, slightly coagulated.

The lungs were bound to parietes by shreds of chronic adhesion, and were intensely congested with venous blood in their posterior inferior portions. The right lung especially was in a condition resembling pulmonary apoplexy of great extent, while the left contained numerous small hemorrhagic infarctions. Heart, healthy; blood, dark in color, loosely coagulated. Spleen, healthy. Kidneys, somewhat congested, but in gross appearance not markedly diseased. Liver, healthy.

Microscopical examination. The exudation at the base of the brain and in the ventricles consisted chiefly of pus, granular corpuscles, and epithelial cells more or less fatily degenerated; the lymph upon the cervical portion of the cord consisted chiefly of fine fibres and oil-globules. The small translucent patches in the lumbar region consisted of coarse dense bands of fibrous tissue, in the meshes of which were embedded numerous mineral masses. Liver cells, normal. Some of the kidney tubes were filled with granular and fatty matter; others were denuded, and others contained cells more or less granular and fatty. Many of them were healthy, as also were the Malpighian corpuscles.

Dr. Jacobi also exhibited a specimen of cerebro-spinal meningitis; and also one of simple inflammation of the pia mater, especially of the upper portion. The latter specimen was taken from the right hemisphere of a young man, aged twenty-two, whose history was a short one. He landed in this country about a fortnight before his death. The brother stated that when a boy the patient had suffered a good deal from headache, and while at school was a very indifferent scholar. After his arrival here he complained of one of his usual headaches, which seemed to be aggravated by nostalgia. About twelve days after he landed, the patient went out with his brother; and while the latter was making a call, he stood on the sidewalk to wait for him. Staying in the house but a very short time, and coming out to look for his brother, he found that he had disappeared. Nothing was known of the whereabouts of the patient until twelve hours afterwards, when he was brought home by the police in an unconscious condition. It appears that during his wanderings he had fallen several times, as there were excoriations about his head and face. He died very soon afterwards.

At the autopsy there were found about two ounces of liquid surrounding different parts of the brain inside the arachnoid, and about half an ounce of the same fluid escaped from the spinal cord. The arachnoid was much thickened, but was very slightly injected. Over the surface were discovered numerous warty excrescences which, on microscopic examination, proved to be made up of a large number of connective-tissue cells and fibres. The diseased condition which had given rise to these exudations was evidently of long standing. The pia mater was injected, the injection being most marked at the base of the brain. It would appear that the final cause of death was acute, the attack coming on that day, perhaps, while he was waiting upon the sidewalk.

The other specimen was one of cerebro-spinal meningitis taken from a boy, aged twenty, who had been in the Mount Sinai Hospital for about four weeks before death, and who had been sick a little more than a week previous to admission. Dr. J. saw him for the first time April 1. The history was the usual one, running through a period of several weeks. The patient, when admitted, had complained of hyperæsthesia, especially of the lower extremities. That had given way to excessive nervousness, and the upper portion of the spine became very painful on pressure. He complained a great deal of headache, had some vomiting, and a good deal of retraction of the muscles of the neck. He was unable to swallow as early as the third week of his sickness. The difficulty of deglutition increased to such an extent that he had to be fed day after day with a tube. This method of feeding grew more and more impossible as the opisthotonos increased, and the man appeared to die more from inanition than anything else.

Through the course of the disease the temperature was oscillating, never more than 105°, and oftentimes very much lower, a fact noted in cerebro-spinal meningitis; the temperature, as a rule, bearing no comparison to the gravity of the other symptoms. The pupils were widely dilated, but equal. Delirium occurred only a short period previous to death. There were no symptoms of paralysis until the last.

Autopsy.—The lateral ventricles contained from two to three ounces of turbid liquid, filled with flocculi of lymph and pus. The surface of the brain was very much injected, and the pia mater was thickened in a large number of places. The veins, large and small, were very much injected. Along the line of the blood-vessels could be seen here and there white streaks, which consisted partly of fibrine and partly of white

corpuscles. In a number of places there were very firm adhesions to the dura mater. The principal changes, however, had taken place at the base of the brain; the medulla oblongata, pons Varolii, and optic chiasm were covered with a solid mass of fibrine, but there was in proportion much less pus mixed with it than was expected from what had been seen on the upper surface of the organ. From the fact of the deposit being for the most part in the immediate neighborhood of the blood-vessels, Dr. Jacobi was of the opinion that the direct migration of the disease, not only through the capillaries, but through the larger veins, was very probable.

The white substance of the brain was about normal, except that it was rather bloody.

The spinal cord was normal in consistency, and its dura mater was much thickened and very much congested.

The kidneys and spleen from the same body were exhibited, and presented in gross a healthy appearance. A piece of muscle was also presented, and was in a state of advanced granular degeneration. Dr. Jacobi had found that this condition was not infrequent in cases of cerebro-spinal meningitis, and that it was to be met with in several organs of the body, such, for instance, as the heart, kidney, and spleen. He thought it was worth while to decide whether such a degeneration had anything peculiar to cerebro-spinal meningitis, or was the same as was often seen in severe cases of typhoid and other fevers, and the general result of an impoverishment of the blood.

Dr. Janeway had met with the same kind of degeneration in cerebro-spinal meningitis, and had seen it make its appearance at the very outset of a case of typhoid fever.

Dr. Putnam had noticed the same conditions in some cases of small-pox.

INTESTINAL OBSTRUCTION.

Dr. Mary C. Putnam presented a piece of the small intestine of a woman who had succumbed to intestinal obstruction under rather peculiar circumstances.

"I was called to see the patient," she observed, "a week ago; she was a woman of 35 years of age, who for some time had been subject to privations, but whose illness duly dated from two days. It had commenced at three o'clock in the afternoon, with a violent pain, extending from the right hypochondrium across the epigastrium into the left hypochondrium, and returning in paroxysms, between which were complete intermissions. After several hours' duration of this pain, the patient had begun to vomit, at first rather abundantly of bile, afterwards merely a small quantity of glairy mucus. All ingesta, fluid as well as solid, were immediately rejected from the stomach. Constipation had persisted during the 48 hours that the pain had lasted, but the invasion of the latter had been immediately preceded by an evacuation from the bowels, in which, the patient asserted, she had passed nine or ten small black stones.

"At the time of seeing the patient the paroxysmal pain persisted with the characters above described; the vomiting was slight; pulse and temperature normal. Pressure on the right hypochondrium was painful, but the liver was not enlarged, nor the gall-bladder perceptible. There was also complete absence of jaundice. Nevertheless the seat and character of the pain, the subordination of the vomiting to it, finally the distinct affirmation of the patient in regard to the passage of substances resembling gall-stones, all these circumstances together led to the diagnosis of bilary calculus and hepatic colic.

"The real cause of the pain, as subsequently revealed by the autopsy, was overlooked in consequence of the very moderate degree of tympanitis, the entire absence of any visible peristaltic writhings of the intestine during the paroxysms, finally the short duration of the constipation.

"An anodyne of opium and ether was administered, and three compound cathartic pills ordered. These were retained by the stomach, but had no purgative effect. Under the influence of the anodyne, however, the pain subsided, and the vomiting ceased as well.

The patient was seen for the second and last time on the following evening. At this time the paroxysmal pain was entirely gone, but the patient complained of a dull pain in the hypogastric region. Examination of the abdomen showed a slight increase of tympanitis, and also a considerable development of the superior portion, while the inferior remained normal. This gave the entire abdomen something of a heart shape. The patient, although declaring herself much better and more comfortable, was much more prostrated than on the preceding day, and was sweating profusely. She complained also that the urine was greatly diminished in quantity; she had only passed it twice during the last 24 hours, and then a very small amount each time. A new purgative was ordered, which had no more effect than the preceding one. The patient, it appears, grew weaker during the night; at half-past seven in the morning was seized with a new attack of vomiting, and died in about two hours, before any medical attendance could be summoned."

The autopsy, performed about eight hours after death, by Dr. Putnam and Dr. James L. Brown, revealed the following state of things.

Across the upper half of the abdomen lay three folds of small intestine, distended to the size of the large, and completely concealing it. The upper fold, covering the transverse colon, occupied the region that had been the seat of the paroxysmal pain during life. In the hypogastrium, reposing upon the bladder and uterus, were three folds of small intestine, entirely collapsed, and blackened as by gangrene. On carefully separating these folds, they were found to be formed of about two feet of the ileum, the lower extremity terminating just above the ileo-cæcal valve. This piece of intestine had evidently been the seat of the obstruction, which had occasioned the dilatation of the bowel above, whose paroxysmal efforts to overcome the obstruction had been the cause of the pain in the hypochondrium. The position of the gangrenous intestine itself in the hypogastrium explained the pain that had existed in this region, on the last day of the patient's life. But the cause of the gangrene was not so easily explained, for there was neither obstruction, intussusception, nor twisting at this or at any other portion of the intestine. The entire mesentery, however, corresponding to the gangrenous segment, was thickened and red, as if from suffused blood. Along the limit of the insertion of the intestine upon the mesentery, were a series of tumefactions like a string of beads.

As the relation between these different details was not immediately perceived, the mesentery was subjected to no further examination, but divided at about an inch from the intestinal border, and the necrosed segment removed for microscopical examination.

Examination of the other organs showed the heart, lungs, spleen, and kidneys perfectly healthy, both ovaries in commencing cystic degeneration; a small fibrous and subperitoneal tumor on the anterior wall of the uterus; the liver in rather advanced fatty degeneration; the gall bladder distended with green bile; with not a trace of biliary concretions present either in the gall

bladder or the ducts. Microscopic examination of the intestine shows that the necrosis was superficial, and only affected the peritoneal and mucous coats. The muscular tunic was intact, but throughout the entire length of the segment blood was effused between the muscular and mucous layers, the ecchymoses extending more or less into the muscular fibre. Section of the tumefactions on the mesenteric border of the intestine showed that they were formed by effusions of blood between the two folds of peritonæum, and just at the point where the superior mesenteric artery gives off a network of branches to ramify between the coats of the intestine. There had evidently been a hemorrhage from the branch of the mesenteric artery, supplying this particular segment of intestine. The effusion between the intestinal coats had had the effect, in the first place, of paralyzing the muscular fibre; in the second, of determining a necrosis of the mucous and peritoneal layers. The paralysis of so large a portion of the intestine constituted so formidable an obstacle to the propulsion of the contents of the intestine, as to determine all the phenomena and symptoms of intestinal obstruction.

But it was the constitutional effect of the internal gangrene which had hastened dissolution much before the period at which death would have occurred in cases of obstruction from ordinary causes.

The cause of the hemorrhage must have been an embolus or thrombosis in the superior mesenteric artery, which, unfortunately, had not been carefully examined. An embolus of this artery was rare. Dr. Putnam quoted, however, five cases,—three related by Ponfick, in the Virchow's *Archiv* for 1858; one by Beckmann, in the same *Archiv* for 1870; finally a case related by Virchow himself in 1859. In every one of these cases there was extensive endocarditis, and it was therefore easy to trace the origin of the embolus. In only one, moreover, was the necrosis extensive; in the others were found only isolated patches of necrosis on the mucous membrane. In Virchow's case there were ecchymoses without any necrosis at all. In none had any intestinal obstruction occurred as a consequence of the hemorrhage.

The present case was rendered remarkable, therefore, in the first place by the occurrence of such obstruction of which the hemorrhage constituted such an unusual cause; by the absence of any cardiac affection to explain an embolism that must almost certainly have been present; by the train of symptoms depending on such various causes—the initial pain depending, probably on the hemorrhage, the subsequent pain on the peristaltic struggle of the distended small intestine; finally the hypogastric pain, rapid prostration, sweating, and early death, being due neither to the hemorrhage nor to the obstruction, but to the extensive gangrene.

Dr. Jacobi suggested, in the absence of cardiac lesions, that the hemorrhage was due to a thrombosis of the veins, rather than to an affection of the arteries.

Dr. Janeway referred to a case of extensive embolism of the superior mesenteric artery that he had observed, without hemorrhage or intestinal lesion.

Dr. Putnam remarked that, according to Virchow, embolism of the larger arteries was much less frequently followed by hemorrhage than obstructions of the small branches.

STRICTURE OF THE RECTUM TREATED BY ELECTROLYSIS.

Dr. Robert Newman said: Mr. President, the specimen I present is a rectum in which a stricture has been treated by electrolysis. As far as the electric treatment is concerned, I claim a success. Only once has the galvanism been applied, and the appearance now proves that the stricture has been improved, and the patient had a rectum which fulfilled its functions; she did not die in consequence of the stricture, but from peritonitis. The history of the case comprises several years, and is as follows:—

Mary Varick, æt. 25 years, widow, first catamenia when 14 years old, married at 18, had one child at 19, is believed to have had an abortion of two months, four years ago, but it is not certain.

Patient came under observation in 1867, and has so remained until death. In 1869 treated her for chancroids, and subsequently for condylomata. She might have had constitutional syphilis, but I am positive of not having seen a primary chancre nor any secondary eruptions. She is perfectly willing to give a true history of her case, but does not recollect to have had any secondary symptoms. She says she had no other venereal disease except the one under my treatment.

March, 1871. Appeared with a stricture recti. Began to treat it with rectal bougie; but on the third time of its introduction she complained that it hurt her too much, and refused further treatment. Dr. Mason once kindly assisted me in the examination.

October, 1871. Appeared again in a deplorable condition. Menstruation has been regular until a year and a half ago, when she had amenorrhœa for a few months. Without any treatment menses appeared again regular for two months, after which amenorrhœa has persisted until the present time, an eight months' duration. The stricture will not permit her having a regular passage from the bowels, which are always constipated, and admit only once in a while of a watery passage. She has pain in the gastric region, the abdomen is swollen, the intestines full of gas. As soon as she has taken a meal, she vomits. She has excruciating pain in rectum and anus, and altogether is much reduced in flesh and very anæmic, presenting a picture of distress and agony. On examination I found the rectal stricture worse than ever. It is situated two and a half inches from anus, very hard and fibrous; the index finger cannot pass it. By forcibly pushing the finger, its point enters the stricture, and then is arrested. Five anal fistulæ wind their way in different directions, and open in different parts of the gluteal muscles. Pus runs constantly from these openings, and sometimes, before breaking externally, sacculates and increases the pain.

October 3d. Bowels were emptied by an injection and a purgative. In the evening a dose of Magendie's solution was given.

October 4th. Operated at my office by electrolysis, with Dr. Whitehead assisting. The patient was in great pain and could not permit any manipulation, therefore ether was given her. The sphincter ani was first stretched. A lead ball on the end of an electrode was introduced to the seat of the stricture. Above the leaden ball the metal was insulated by a flexible rubber covering. The end of the wire was attached as the negative pole to a Stoehrer sixteen-cell battery. The circuit was completed by a sponge electrode as the positive pole, held firmly on the gluteal muscles. All sixteen cells were brought in operation for twelve minutes, after which the stricture was considerably dilated, some of the fibrous mass absorbed. However, the stricture was only improved and not cured; it had not the normal size, nor the muscular appearance on touch. A dose of Magendie's solution was given subcutaneously, and the patient went home in a car.

October 5th. Feels nauseated from the ether, and has pain in rectum. Ordered suppositories of belladonna.

October 6th. Dilatation with Dr. Whitehead's instrument. Dr. W. R. Whitehead's instrument for dilating the rectum is described and illustrated in *American Journal of the Medical Sciences*, January, 1871, p. 117. It is a hard rubber tube for the injection of water, surmounted by a delicate flexible probe, which acts as a leader or director for the easier introduction into the rectum. This skeleton is covered with five or six condoms. After the instrument is firmly introduced and lodged in the rectum, a Davidson syringe is attached to the outer end, and warm water is injected for the dilatation. About five bulbs of water is as much as the patient will endure.

October 7th. Feels more cheerful and has no pain.

October 10th. Walks about the house, feels pretty well, and has no pain.

Since that time she felt so well that she refused any further treatment or examination; neither did she use Dr. Whitehead's dilator. I have seen her off and on. Sometimes she felt worse, but at other times she was in excellent health. The stricture did not trouble her, and her bowels were pretty regular. Yesterday, April 9th, I was called to see her, and found her suffering from peritonitis. Constant vomiting of greenish, bitter matter, watery discharges from the bowels, abdomen swollen and tender, pain and restlessness, were the symptoms. She grew worse, and died this morning at five o'clock, April 10th. At noon a post-mortem was made. Rigor mortis very marked. The whole abdominal cavity was filled with thick pus of a yellow color. All the viscera in the abdominal cavity and omentum were covered with a thin layer of freshly effused lymph. Parietal peritoneum free. The disease was of so recent a date that no adhesions had formed. The posterior wall of the rectum was firmly adherent to the sacrum. Condylomata in vagina and around anus. Mucous patches in lower end of rectum. The rectum and intestines were free from hardened or accumulated fæces; no scybalæ found. Dr. Terry assisted me kindly at the post-mortem, and immediately after made a microscopical examination of the rectum. He reports that the microscope shows no heterologous tissue, and nothing strictly neoplastic.

The specimen shows that the stricture has not troubled the patient, and that it has not grown worse since the operation, seven months ago. The real fibrous tissue has been absorbed, the muscular coat only partly restored. The calibre of rectum considerably encroached upon, but by far better than before the operation. There are mucous patches, condylomata, and cicatricial tissue, looking as if it is of recent growth. Some small openings or depressions in the mucous lining and muscular coat are the remains of the rectal fistulas.

Association of Medical Editors of the United States.—This Association held its Third Anniversary Meeting on the morning of May 6th, in Horticultural Hall, Philadelphia, the president, Dr. B. F. Dawson, occupying the chair. A resolution was adopted offering a prize of $100 for the best essay on some subject, to be determined at each annual meeting, to be competed for by all medical editors. Drs. Dawson, Davis, and Stone were appointed a committee to recommend a subject for the next essay, and to appoint a committee to decide upon the best which should be offered.

The Association reassembled last evening, when they were addressed by the President, on the "Origin of Medical Science."

After the transaction of some minor business the meeting adjourned.

Correspondence.

LOSTORFER'S SYPHILIS-CORPUSCLE.

SECOND LETTER FROM

Prof. FREEMAN J. BUMSTEAD, M.D.

Vienna, April 27, 1872.

To the Editor of the Medical Record.

My Dear Doctor,—I wrote you on the seventh of this month an account of what Prof. Stricker had done up to that date in his investigations with regard to Lostorfer's "Syphilis-Corpuscles," and will now give you from my note-book the further continuation, and, I may add, the *conclusion* of his labors.

I spoke in my last of the difficulty met with by Prof. S. in preventing the drying of the specimens of blood and at the same time in preserving them from the addition of water, the smallest quantity of which in his opinion vitiates the specimen for the purposes of examination. The method finally hit upon was to employ a *large* bell-glass with ground edges and standing upon a glass plate, under which the specimens were kept together with a *small* amount of water, the evaporation from which was not sufficient to condense upon the slides and gain access to the blood.

Prof. Stricker also insisted further upon precautions to be taken in first drawing the blood, that the specimens should not be too thick, nor, on the other hand, too thin; that interspaces should exist between the fields of red blood corpuscles, in which the development of Lostorfer's bodies could be watched for; and, finally, that the specimen should not be pressed upon by the covering glass. To accomplish the last-named purpose, he first warmed the slide and smeared it with a thin layer of wax on three sides of a square, within which the blood was placed and which served to support the covering glass. He also suggested a cell cut from a thin layer of mica for the same purpose.

I spoke in my last of the sources of error attending these examinations, and in this connection will mention the following occurrence, which I witnessed. A friend of mine who had been working with the microscope in Prof. Wedl's laboratory and who had been searching for the bodies of Dr. Lostorfer, brought round to Prof. Stricker a specimen of blood, without telling him that it came from himself and that he had never been affected with syphilis. This specimen was thickly studded with points which to a less educated eye had every appearance of Lostorfer's bodies. Prof. S. looked at it under the microscope and first remarked: "The specimen is not well prepared. The field is overloaded with red blood corpuscles. There are no interspaces." He then added: "These are not Lostorfer's bodies. They are vacuoles. You can recognize them by their color, which is slightly reddish. If you allow the specimen to stand for twenty-four hours, you will find they have disappeared."

My notes of what occurred in Prof. Stricker's laboratory from day to day present nothing more worthy of mention, except that he one day informed me that he had in several instances seen two of the bodies united by a stem or pedicle, in the form of a dumb-bell; that the stem gradually shortened, the bodies approached each other and apparently coalesced; that they did not remain so permanently; on the contrary, they separated from each other again, being still connected, however, by an intervening pedicle.

The method and results of his investigations, which I have thus far given, have since been made public by Prof. Stricker at a meeting of the Wiener Medical Society, held a week ago, April 19th. But I have now a more important discovery to report, which was first announced at the meeting of the same society held last evening, April 26th, and which Prof. Stricker regards as the termination of his labors upon this subject.

Your readers have not forgotten the patient mentioned in my last whose blood contained Lostorfer's bodies in such large numbers and presenting such early development; also, as I stated, that this man was in an extremely cachectic condition, that he had several attacks of hemorrhage from the lungs, and that his life was at one time despaired of.

Prof. Stricker had thus far examined only the blood of sound persons, of persons affected with syphilis, of a number with lupus, and of several with acute diseases, as typhus fever, etc. Among these he had found the bodies exclusively in the syphilitic cases, with the exception of two cases of lupus, in which they were unquestionably present [a second case having been met with in addition to the one mentioned in my last letter].

But in considering the case I have above referred to, the question now occurred to Prof. Stricker how far the abundance and early development of the bodies was due to the cachectic condition of the patient, and whether this same condition was not sufficient to produce them independently of syphilis. To determine this point, he took blood from a girl, 17 years old, who had never had syphilis, and who was now in the last stages of tuberculosis; he examined it under the microscope; *Lostorfer's bodies were present!*

He examined another similar case and with the same result. Further, he examined the blood of three persons dying of carcinoma, and still another exhausted by Morbus Brightii; in all he found the "syphilis-corpuscles," although the patients had never had syphilis!

Here then were six persons free from syphilitic taint, but whose nutrition and vital powers were impaired by different diseases, and blood from all of them exhibited the peculiar and (to use the words of Prof. Stricker) "newly discovered" corpuscles of Dr. Lostorfer!

The conclusion was evident, viz., that the presence of these bodies is due to the impairment of nutrition and the cachectic condition of the individual, and not to the existence of syphilis or any other one disease exclusively.

The announcement of this result formed the substance of the remarks of Prof. Stricker before the Society last evening. It was followed by him with a statement of the different possibilities to account for the origin of these bodies, but as these were hypotheses, I will not repeat them. No public discussion of Prof. Stricker's remarks was held by the Society. After the meeting, I conversed with several members of the opposite party, and found them jubilant over the result. They had repeatedly asserted, and had probably led themselves to believe that Prof. Stricker had committed himself to the syphilitic nature of the Lostorfer's corpuscles; his "renunciation" of it they looked upon as a triumph for themselves. As I said in my first letter, however, Prof. Stricker has never thus committed himself, either in his public remarks before the Society, or in what he has written, or in the private conversations which I have had with him; and it appears to me that his conduct has been deserving of all praise, and worthy of his high scientific reputation, in going quietly, seriously, and earnestly to work to investigate this alleged discovery, instead of at the outset rejecting it with a mere denial and a sneer.

As I have already stated, Prof. Stricker regards these bodies as a new discovery. Whether he is aware of the statements of Dr. Lionel S. Beale, of London, with regard to "innate particles of bioplasm," etc., to which Dr. Otis calls attention, and, if so, what he thinks of them, I do not know.

Since my first letter, Prof. Salisbury, of Cleveland, has kindly forwarded several copies of his paper upon his Syphilitic Fungus or Crypta Syphilitica. In a letter accompanying the parcel, he writes me: "The reason Dr. Lostorfer does not see the syphilitic spores in fresh blood readily, is that they are mostly held in the *colorless corpuscles*, which cells are the vehicles which carry them from the spleen and mesenteric glands into the blood stream.

"In old and long standing cases of severe secondary and tertiary syphilitic disease, especially in broken-down constitutions, the colorless corpuscles become rotten, broken, and pus-like to a greater or less extent; and, in such cases, the spores are found many times numerous, outside the colorless corpuscles, swimming in the serum. These are the cases in which the filamentous development of the vegetation may be noticed.

"Many times the spores are so perfectly transparent, like the serum in which they swim, that it requires the best objectives, and an experienced eye and manipulation to detect their presence.

"I can readily appreciate the difficulty of Dr. Lostorfer's labors, as several years ago I travelled over the same ground, and first detected spores in blood that had been standing several days between the slides of the microscope."

I presume that no one will be inclined to question Prof. Stricker's skill in the use of the microscope, and, with regard to the objective, he has commonly employed No. 10, immersion of Hartnack; but also, in many of his examinations, Hartnack's No. 15, only four of which are known to be in Europe. Yet with this skill and with this power in his instrument, Prof. Stricker has found nothing in the blood answering to Prof. Salisbury's description of "Crypta syphilitica"; moreover, it is not to be supposed that Prof. Salisbury himself will regard his "crypta" the same as Dr. Lostorfer's "corpuscle," now that the latter has been proved to exist in non-syphilitic blood.

Sincerely yours,

F. J. Bumstead.

HOSPITAL APPOINTMENTS.

To the Editor of the Medical Record.

Sir—In your issue of April 15th, you have invited discussion upon matters connected with our hospital management, which need ventilation, with a view to reform. Permit me, in reply, to call your attention to a recent occurrence which not only bears the appearance of "stifling legitimate endeavor," but also savors of injustice.

At the last examination of candidates for appointments on the Medical Staff of Charity Hospital, there appeared, among twelve gentlemen competitors, a recent graduate from the Women's Medical College of the New York Infirmary. She passed a satisfactory examination, and ranked third of the five successful candidates. The Medical Board, in a subsequent debate upon the propriety of obeying its own laws, resolved to withhold her name from the Commissioners; at the same time appointing a committee of three to explain to her the reasons for such withholding.

The explanaiton involves several presumptions of a peculiarly inconsistent nature, by which one would infer that when a woman studies anatomy, surgery, pathology, and therapeutics, she confines herself to carefully prepared wax models representing only a limited number of organs, and that in her subsequent practice of medicine, she is to be subject to the conventionalities of the ordinary votary of fashion. At the same time her oath not only demands of her the unrestricted practice of medicine, but in the examination preliminary to its acceptance, she is rigidly held responsible for a practical knowledge of natural cadavera and of all diseases. Furthermore, strange as may seem the contradiction, the second name on this committee of three is also appended to the certificate of qualification in virtue of which the candidate was allowed to take the oath.

The explanation further maintains that the peculiar character of Charity Hospital makes eminently unfitting the appointment of a lady physician on its resident staff, and assumes that had the lady known its character she would not have sought the position. Granting these to be the honest convictions of the gentlemen, which would have been the more courteous and just proceeding on their part, to state them to the candidate, leaving it optional with her to claim or relinquish her right of appointment (which they did not), or to arrogate the right of putting in her place a gentleman of inferior rank, which they did?

The explanation admits the right of properly qualified lady physicians to appointments in public hospitals, "Charity" excepted. Now it happens that the same candidate attempted to compete for Bellevue Hospital, but was unable to secure the requisite endorsement for her application. Why? Simply because it was an innovation.

With this brief sketch, allow me, Mr. Editor, to suggest for discussion the two following questions:

Is the bare fact of innovation a sufficient pretext for refusing the right of competition?

If the management of Charity Hospital is such as to unfit it for the residence of any duly qualified Doctor of Medicine, should it not be so amended as to obviate this objection?

Very respectfully,
Mary J. Studley, M. D.

New York, April 10th, 1872.

AN APPLIANCE FOR TRACHEOTOMY.

To the Editor of the Medical Record.

Sir: On looking over the files of the Medical Record I see an account in the number for September of a ready method of making a tracheotomy tube, the device of Dr. B. Howard. I am thereby reminded of a contrivance which did me excellent service two years since in a case of croup, in which I had opened the trachea. The patient to whom I refer was a young boy, very fat and short-necked, the wound in the trachea, therefore, being very deep. For this reason a tube was inapplicable, and I attempted to use the usual double blunt hooks, with tapes passing around the neck, a plan, in my estimation, superior to the tracheotomy tube, whatever may be its construction and in all cases. I failed, however, after a patient, persevering trial, owing chiefly to the patient's intolerance of the pressure necessarily made by the tapes in their circuit around the neck. I then attempted to keep the wound open by inserting the tips of the Trousseau's forceps between the tracheal lips, and tying the handles back with a string. But the instrument was too clumsy, and presently fell out by its own weight. The case was becoming embarrassing, when, luckily, my eye fell on a pin-cushion. In it was sticking a large toilet hair-pin, each limb perhaps three inches long. I caused this article to straddle the female catheter of my pocket-case, and, holding it firmly, bent each limb a half inch around the catheter. On withdrawing the latter I found that I had formed an elastic ring at the bent part of the hair-pin. The tips of the pin were then bent at right angles and the points inclined a little towards one another, and I had an instrument in principle, at least, like a spring eye speculum. The points of this improvised speculum I introduced between the tracheal lips, the short and bent part of the limbs looking upwards towards the larynx. On releasing the instrument from the pressure of my fingers, the tracheal wound was readily kept open. The instrument maintained its place partly by its own elasticity and partly by the aid of the short bent limbs, which prevented its falling out by its own weight, or, indeed, by any force which could be applied when the patient stood or sat erect. To remove it, it was necessary to carry the ring end upwards towards the chin (after the manner of withdrawing a catheter). The contrivance was worn four days. It did not slip out nor make painful or undue pressure, nor interfere at all with the removal of the usual tough mucus. Had the operation been made for the removal of a foreign body from the bronchus, I should have hoped that if the foreign body had escaped the opening in the trachea and gone up towards the larynx, that it would have been detained there, owing to the fact that the points of the hair-pin speculum being sharp and bent a little inwards, although allowing the body readily to pass upwards, between them, would prevent its return downwards, the body becoming impaled upon points. The case may be illustrated by that form of mouse-trap which allows the animal to squeeze in, but which opposes to its egress a circle of sharp points. This, however, is but a secondary advantage, perhaps an imaginary one. I have never used any contrivance in tracheotomy which has given me the satisfaction of that above described, and, thinking the idea may be useful to some one deprived of a cutler's aid, I have placed it on record.

I am yours, respectfully,
J. H. Bill, Surgeon U. S. Army.

Fort Vancouver, W. T., April 1st, 1872.

UNSCRUPULOUS CRITICISM.

In the April number of the *Journal of Psychological Medicine*, edited by William A. Hammond, M.D., appears an article—purporting to be a review of Dr. Edes' essay on "The Physiology and Pathology of the Sympathetic Nervous System," to which the O'Reilly Prize was awarded by the New York Academy of Medicine—so flippant and ill-natured in tone, and so unfair in its statements, that we are unpleasantly surprised to find it allowed a place in a journal of such high pretensions.

Beginning with a page or so of general comments, discourteous alike to the author of the essay, to the committee of distinguished gentlemen by whom the award was made, and to the society in behalf of which they acted—the severity of which comments would lead us to anticipate the exposure of most glaring and unpardonable errors in style and matter—the reviewer proceeds, as he says, "to adduce sufficient evidence to show that we have not been reckless in our assertions."

We find first, that he has little more on which to

base his sweeping charge of "bad English," "inelegancies of composition, and "feebleness of utterance," than certain instances in which the essayist has omitted definite and indefinite articles, which, if it be a fault, is one which leans in the right direction—towards brevity. These instances occupy a large portion of the review. Much of the remaining portion is filled with instances where, for the sake of brevity, quotations have been shortened by the omission of parts unessential to the illustration of the subject under discussion. If this be not justified by custom, we feel sure that most readers would regard it as a very venial fault.

The reviewer complains of Dr. Edes for referring to page 216, vol. i., of Romberg's work on Nervous Diseases, a subject that is found on page 217, when a few paragraphs before he has himself made a similar mistake, by referring to page 125 of the essay a paragraph that is found on page 126.

Having thus devoted most of his space to these trivial matters, instead of "adducing sufficient evidence that he has not been reckless in his assertions" as regards statements of fact and theory, he disposes of all this part of the subject with a few brief paragraphs, the general character of which for fairness may be illustrated by the final one, which we quote.

"It is stated (p. 8) that the sympathetic 'consists then of the ganglion-bearing cord, situated on the sides of the vertebral column from the superior cervical ganglion to the ganglion impar.' We humbly, with due regard for Dr. Edes' anatomical knowledge, demur to this statement. The sympathetic nerve, as any first-course medical student ought to know, extends a considerable distance above the superior cervical ganglion, and even into the cranium, where it forms several plexuses, and has several ganglia."

On turning to the page cited, we find that the passage referred to reads as follows:—"The system to be considered, which we call the sympathetic, consists, then, of the ganglion-bearing cord, situated on the sides of the vertebral column from the superior cervical ganglion to the ganglion impar; *of four ganglia in the head, ophthalmic, spheno-palatine (Meckel's), otic, and submaxillary; and of various large and small ganglia in the thorax and abdomen, with their connecting cords, besides the vaso-motor fibres accompanying cerebro-spinal nerves from their origin in the spinal cord, not having passed through the ganglia.*"

The reviewer says, "Dr. Edes certainly cannot know the power of quotation marks." We would suggest that the reviewer seems hardly aware of the power of punctuation marks, for he puts a period where there was only a semicolon in the original, thus cutting short a sentence in such a way as to do the greatest injustice to the sense of the passage. Would it not be a stretch of charity to regard this even as a piece of the grossest carelessness, and not a deliberate falsification?

To those who are acquainted with Dr. Edes, and know his thorough education, his extensive reading, his skill as a microscopist, and his habit of original thought and investigation—qualities which gained for him the honorable position of professor in Harvard University—the sneering advice with which the so-called review concludes will seem peculiarly inapplicable.

In conclusion, we would remind the reviewer that courtesy in manner and fairness of statement are subjects he may well study with advantage to himself and the public, if he has any idea of again appearing as a critic, and does not wish to degrade medical literature by a recklessness of language which would disgrace the lowest partisan newspaper.

ARTHUR MATHEWSON, M.D.

BROOKLYN, April 20, 1872.

GRADUATION OF IMPROPER PERSONS.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR,—On page 163 of your Journal, under the head of "Graduation of Improper Persons," I find, in a report made to the Alumni Association of the Medical Department of the University of the City of New York, and signed by James R. Leaming, President; Charles Inslee Pardee, Secretary, the following words:—

"He presented letters of recommendation from Dr. Abram Jacobi, Professor in the College of Physicians and Surgeons, who had been his chief accuser, and on account of whose statements the candidate had been held in abeyance for a year, withdrawing his charges," etc.

In regard to these statements, I shall simply say to-day that I have inquired from Dr. Chas. Inslee Pardee on what authority these statements have been made. As soon as I shall have received an answer to my letter I shall probably take the liberty of again addressing you on the subject.

Yours very respectfully,

A. JACOBI, M.D.

New Instruments.

A NEW ELASTIC ARTERY-COMPRESSOR.

BY CHARLES K. BRIDDON, M.D.,

NEW YORK.

I HAVE often been compelled to resort to ligature in the treatment of external aneurism where I would gladly have used compression had I been able to supply myself with a good compressor. It may seem strange that in a large city like New York such a want should exist. Or it may be that I was difficult to please. At all events, I ransacked the stores of the surgical instrument-makers and the collections of my professional friends, with the same result; all I could find were relics of the past, all had the same objectionable features, and all were on the same principle—two pads attached

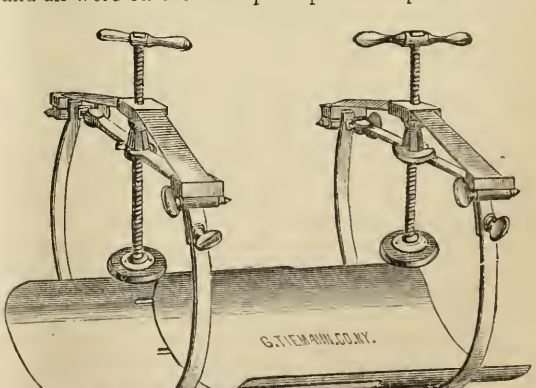

Fig. 1.

to long arms or levers, united by a hinge worked with rack and pinion, or other device for altering relation of same; all difficult to keep in position, and all exercising that dead pressure or brute-force that is so apt to contuse and do violence to the parts compressed. If it were not that the artery eludes such pressure by

rolling from its grasp, the consequences might often be disastrous. As it is, I think the injurious effects are most often limited to the super-imposed tissues, as the histories of cases so treated are replete with the relation of such accidents as vesications, excoriations, and even abscesses, glandular or in the connective tissue. I can call to mind one case occurring in one of our hospitals, where compression was followed by end-arteritis, sloughing of the sac, and death.

On a late occasion (1871), having to treat a popliteal aneurism occurring in the person of a member of the medical profession, I devised an instrument which exercises the necessary pressure through the medium of elastic bands. Of course I am aware that Dr. Cartes' apparatus acts on the same principle, and I do not mean to claim any originality. I could not find one of his instruments or a description of it, and I was driven by necessity to model one myself. It was made for me by Mr. Stohlmann, of the firm of Geo. Tiemann & Co., 67 Chatham street; and when I say that I used it in the case above alluded to for five hundred and eighty-eight hours in fifty-six days, without being annoyed by anything like a vesication or excoriation, and that it fulfilled all the indications perfectly, I think I assert sufficient to induce my professional brethren to buy it.

The elastic Artery Compressor, as depicted in the accompanying woodcut, is adapted to the treatment of popliteal aneurism. It consists of two concave plates sliding upon each other, each plate having two lateral arms, the curves of which are so arranged as to embrace two-thirds of an ordinary-sized thigh without touching or exerting any injurious pressure. Attached to the extremities of each arm is a cross-bar, with a slot in the centre. This slot is one inch deep, and the inner surface of the bore is smooth and a little larger than the screw which traverses it. Its office is to prevent lateral movements of the screw. To the ends of the lateral arms are also attached brass mortises through which pass a double band of India-rubber belting one inch wide, and one-sixth of an inch thick. The middle of this band is surrounded by a square brass box with open ends, in the centre of which is a female-screw which receives the male. The ends or loops of belting which pass through the mortises are secured in position by steel bolts.

The compressor is attached to the screw by a ball and socket joint. It is made of hard rubber, and fits into additional compressors of hard wood, covered with buckskin pads.

The bed-plates are so arranged that the distance between the compressors can be changed at will, or they can be taken apart and used separately.

An instrument on this principle could be made to compress the abdominal aorta, or smaller ones could be adapted for the upper extremity.

In using compression, it is desirable for the comfort of the patient to secure as many points for pressure as possible; and I should deem it judicious to avoid making pressure on that part of the artery which, in the event of failure, may afterwards become the seat of an operation. Long-continued pressure causes considerable condensation of connective tissue, sometimes absorption, and may produce such modifications in the nutrition of the coats of an artery as to influence processes of repair after ligation. In the treatment of a popliteal aneurism I would suggest three points of pressure; one at the pubes, another two and a half or at most three inches below, and a third four inches below the second.

Compression at the groin will be best made by a leaden weight of about eight pounds, resembling in form, but slightly diminished in size, the upper half of a citrate of magnesia bottle, with a neck a little elongated, to permit manipulation with the fingers in placing.

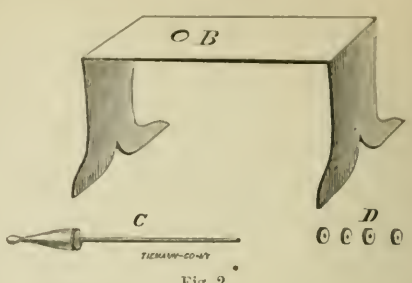

Fig. 2.

COMPRESSOR FOR THE GROIN.

No. 1.—Steel rod one quarter of an inch thick and twelve inches long, attached to No. 2. Leaden compressor, six pounds in weight; small end one inch in diameter, convex, as smooth as possible, and covered with several thicknesses of buckskin.

No. 3. Perforated weights to slide over steel rod, to be made of lead—two weighing two pounds, and two one pound each.

No. 4. Wooden cradle to support the compressor in position over the pubes.

it in position. This end must be covered with buckskin. Into the base is fixed an iron stem twelve inches long, and a quarter of an inch in diameter. This stem is held in position by a cradle or thin board four or five inches wide, and twenty-one or two inches long. Six inches from either end is a circular aperture three inches in diameter. The cradle is supported by legs twelve or fourteen inches high. It will be necessary to have four or five perforated leaden discs, weighing one pound each; and a sufficient number of these may be run on the stem to control the circulation entirely, and then the removal of one disc will permit such a stream as will best favor the deposition of laminated fibrine.

At the risk of being considered tedious, I have been thus minute in furnishing the details of a mechanical appliance. But I felt the want of such minutiæ myself, and this must be my excuse for giving them to others.

67 West 23d Street, N. Y. City.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 19, 1872, to May 4, 1872, inclusive.

CAMPBELL, John, Surgeon.—By S. O. 67, Department of Dakota, April 18, 1872, granted leave of absence for twenty days.

LORING, L. Y., Assistant Surgeon.—By S. O. 64, Department of the Mo., April 19, 1872, to report in person by the 10th of May to the Commanding Officer, 6th Cavalry, at the Summer Camp of the regiment, near Fort Hays, Kansas.

CAMPBELL, A. B., Assistant Surgeon.—By S. O. 95, War Department, A. G. O., April 23, 1872, relieved from duty in Department of Dakota, and to report in person to the Surgeon-General.

Medical Items and News.

Woman's Medical College of the New York Infirmary.—The Commencement exercises of this College were recently held at Association Hall. The history of the institution was briefly recounted by Mr. Robert Haydock, of the Board of Trustees. Degrees were conferred by the President, Samuel Willets, upon eight ladies, viz.: Miss Emily Anthon, N. Y.; Miss Mercy N. Baker, Maine; Miss Elizabeth M. Cushier, N. J.; Miss Phœbe J. Ferris, Conn.; Mrs. Elizabeth S. Horr, Maine; Mrs. Susan F. Mackintosh, N. J.; Miss Nancie E. Monelle, N. Y., and Mrs. Mary J. Studley, Mass. Prof. Hackley's prize, of a case of aural instruments, for the best report of the clinical instruction in Ophthalmology and Otology, was awarded to Miss Emily H. Wells, Pa.; Prof. Ward's prize, of a surgical pocket-case, for the best report of his Surgical clinics, to Miss N. E. Monelle; and the prize of a case of obstetrical instruments (donor's name not made public) for the best final examination in Physiology, to Mrs. S. F. Mackintosh.

Prof. Mary C. Putnam, M.D., delivered an address upon the true method in Medical Education. She brought out very clearly and forcibly the principle that the knowledge which is really to be of use to the physician must be that gained by his own observation, not that taken on the authority of books or lectures. From the beginning, therefore, the student should be taught to observe, to experiment, and to think, for himself. His chemistry should be learned in the laboratory; his histology and physiology by work with the microscope and experimentation on animals; his diagnosis and therapeutics by study in dispensary and hospital of actual cases, for which, under proper supervision, he is made responsible. In this way, and in this alone, would his practical skill keep pace with his theoretical knowledge; he would really know his subject, and not simply know about it. When called to a case of emergency he would be prepared, at once, and with a just self-confidence, to bring all his faculties to bear upon it—would think with his whole body, that had been trained for this very work, and not be driven in despair to his note-book or his library. Having once learned the true method of study, he could never become a routinist, but would hail every new case as a problem for fresh investigation.

The speaker sketched a plan in which all the medical charities of our metropolis should be organized in a grand system for the purposes of instruction. The students of the various schools would be divided into small classes for clinical work, each class under the immediate charge of a clinical clerk, and the whole under a central directory; so that wherever a case occurred of interest to a special class, the notification could immediately be given and the opportunity improved.

Contrasting what ought to be done in this direction with the mode of instruction at present pursued in our schools, the Doctor characterized our lecture system as an enormous anachronism, a legacy of the times of mediæval darkness, when original scientific study was a thing unknown, and the only fountain of learning was the wisdom of the ancients; when the business of the medical teacher was to give epitomes of Hippocrates and Galen, and that of the student to make and memorize his abstracts of these epitomes. Now, fully as we realize the grave deficiencies of our colleges, we think she has here done them less than justice. Their professors do not, as a rule, content themselves with reiterating the theories of past centuries, or even of the past decade. They keep abreast of the times, and give the student the latest results of investigation, which cannot be found in his text-books, but must be sought in monographs and journals. True, there are exceptions, even in our own city; but we claim that they *are* exceptions to the rule. For this purpose, then—to announce the last revision of scientific theory, as well as the newest facts of observation, and, moreover, to present the grand outlines of a subject in the vivid and impressive way which no book can imitate—we hold that the accomplished lecturer has still a most important place to fill. We agree, however, that every fact must be made the student's own by practical experiment where this is possible; that he must be taught to test every theory in the crucible of his own reason; and that the lectures are valuable only as they lead him to do so.

The only reference to the recent change of curriculum in the Medical Department of Harvard University was the statement that laboratory work, formerly optional, was now compulsory. We think the stand taken by this school deserved a more cordial recognition. Its compulsory laboratory work extends not only to chemistry and gross anatomy, but also to microscopy and physiology. Its clinical instruction really deserves the name, the senior students being expected to diagnosticate cases, prescribe their treatment, and present written reports of them, which are discussed before a "conference" of the class, presided over by a professor. This, and other similar features, we remember as prominent in the course many years ago. Taking the above in connection with the late gradation of studies through the three years, and the required attendance on recitations during the summer, we think the school goes far toward fulfilling Dr. Putnam's idea. A preliminary examination for matriculation, and an extension of the term of professional study to four years, are still, however, great desiderata.

We have touched upon only a few points of this address, which was marked not more by its suggestiveness than by its earnestness, sometimes rising to eloquence.

Joseph H. Choate, Esq., followed, speaking of the position of woman in different periods among the most cultivated nations. Coming down to our own time and country, he dwelt upon the great numerical preponderance of women in the Atlantic states, the result of war and emigration, as one of the strongest practical arguments for their entering new fields of labor and becoming self-supporting. One hundred and fifty thousand girls of this generation could never be married, unless we were to become polygamists; and prejudice must inevitably give way before the figures of the census. For the women who should find their natural sphere, as wives and mothers, a broad and thorough education was no less necessary, to fit them for the proper training of their children. We think the speaker might have insisted upon it, with at least equal force, for their own sakes. Our limited space precludes any further account of his brilliant discourse.

Dr. F. N. Otis will read a paper at the next meeting of the County Medical Society, May 20th, 1872, on the Physiology of Syphilitic Infection, as applied to the successive manifestations of the disease.

Medical Teaching.—The Valedictory Address of Professor R. O. Cowling, M.D., delivered to the graduating class of the University of Louisville, Ky., March 1, 1872, gives the following particulars: Billroth's Surgical clinic occupies nearly three hours a day, five times a week, during ten months of the year, and besides this is the care of his vast wards. In but five of the

American states is the pursuit of anatomy allowed by law. Rokitansky, the founder of the Austrian Medico-anatomical School, performed from 1831 to 1844, thirty thousand dissections. The University of London looks down upon the requirements of Oxford and Cambridge.

A Bequest to a Medical Man.—Dr. McIntyre, of Oldham, operated upon a lady about twenty years ago, for femoral hernia, and cured it. The lady died recently, and has left him, as one of her executors, a legacy of £100, together with a bequest of £4,000 "in testimony of his great kindness and professional skill." —*Phila. Med. Times.*

Syracuse University.—A portion of the faculty of the Geneva Medical College, N. Y., have accepted chairs in the new "College of Physicians and Surgeons of the Syracuse University," which will be formally opened during this year.

The Eye Infirmary of Glasgow, Scotland.—H. A. Cleland, M.D., Glasgow, Correspondent of the *Detroit Review of Medicine*, writes of this Infirmary, the scene of the labors of the famous ophthalmologist, the late Dr. McKenzie—now presided over by Dr. Thomas Reid. Over 6,000 cases were treated in 1870–1. The student of ophthalmology has a richer field for observation there, than almost anywhere else. There is a very peculiar and common type of disease belonging to a condition of defective nutrition, illustrated in the Eye Infirmary by corneal ulcerations, scrofulo-catarrhal ophthalmias, etc. This characteristic is more marked in Glasgow, than in any other city in the United Kingdom. In operations on the eye, chloroform is seldom given, Dr. Reid affirming that, especially in the more delicate ones, the patient is usually more manageable without than with it. He considers the fixing forceps as a refinement of barbarism, and never uses them.

White Sulphur Springs, of Greenbrier, Virginia.—Prof. J. J. Moorman, M.D., of Washington University, Baltimore, and Physician to the Greenbrier White Sulphur Spring, Va. (*Atlanta Med. and Surg. Journ.*), regards a proper use of the White Sulphur water as a decided preventive of that feeling of necessity or desire for the use of strong drink, which drives the inebriate to use it in despite of his judgment to the contrary; in other words, that its proper use allays or destroys the appetite or nervous craving for ardent spirits. He has witnessed hundreds of cases fully justifying this statement. The influence of the waters depends, *first*, upon the action of the sulphuretted hydrogen gas which abounds, and which is an active nervous stimulant; *second*, upon the alterative influence exerted upon the entire organism.

Medical School of Berlin compared with that of Vienna.—In an interesting article on this subject, by Dr. D. F. Lincoln, of Boston (*Boston Med. and Surg. Journ.*), much information may be gained with reference to medical teaching in Germany. He regards Berlin as a superior medical centre to Vienna, for a general medical education. Vienna is the school for specialties. Let Skoda, Oppolzer, and Rokitansky stand for what the Vienna school has been during the last twenty years, and let Virchow, Von Graefe, and Griesinger stand for Berlin. He says one is struck with the fact that the latter trio is composed of *great* men, in a sense in which the expression does not apply to their Viennese colleagues. Virchow stands undoubtedly head and shoulders above his colleagues in Berlin. His lectures are about two hours and a half long. Prof. Westphal, of Berlin, the successor of Griesinger, who introduced the "non-restraint" system in the wards under his charge, has a valuable clinic for mental disease. During the four years superintendence of the Neue Charité, the strait-jacket has never been applied to a single one of the 150 insane who fill the wards. In electro-therapeutics, the names of Eulenberg and Hitzig are well known, and their private lectures are better worth attending than those in Vienna.

Last year there were 2,113 matriculated students in Berlin, of whom 454 were studying medicine; 456 were foreigners.

Georgia Lunatic Asylum.—Drs. James F. Bozeman and Wm. Henry Cumming have been appointed to examine into and report upon the management and condition of the State Lunatic Asylum of Georgia.

Calculi under the Prepuce.—Dr. H. W. Nelson (*Pacific Med. Journal*) recently circumcised a Chinaman, and removed thirty-eight calculi, varying in size from a No. 6 shot to a buck-shot. Retention of urine in a sac formed by the prepuce from phymosis was the cause.

Reproduction of the Tibia.—Dr. Cheever (*Richmond and Louisville Med. Journal*) records the removal of the entire shaft and lower epiphysis of the tibia, with its subsequent reproduction, a useful limb resulting. Extracts from five other similar cases are appended.

An Unusual Case of Strangulated Hernia.—In a case of strangulated hernia of one hundred and twelve hours' duration, relief was afforded by an operation by Dr. Geo. Hill (*Med. and Surg. Reporter*). The patient, aged seventy-eight, was about his room at the end of three weeks, and finally recovered completely.

Cholera in Paris.—The death of a soldier in Paris, from cholera, is reported as having occurred during the latter week of March.

The Persian Famine.—In a letter of Dr. Wills, of Shiras, the famine in Persia is described to be so severe that the people eat grass wherever they can find it; and at the slaughter-houses, when an animal is to be slain, there are crowds of starving poor ready to lap up the blood from the ground.

Professor Huxley has been nominated by the students as candidate for the Lord Rectorship of St. Andrew's University.

Yellow Fever.—The English Vice-Consul at Ciudad Bolivar, on the Orinoco River, Venezuela, reports (*Nature*) that an old woman had applied an efficacious remedy for yellow fever and black vomit, consisting in the juice of the vervain plant, obtained by bruising the leaves. Small doses of this juice are taken three times daily, and injections of the same are administered every two hours until the bowels are completely emptied. It is said that a reduction has taken place in the number of fatal cases in the practice of physicians who have employed this remedy.

A New Excipient for Pills.—Mr. Barnes, in a communication to the Pharmaceutical Society (Eng.), has recently proposed the use of soluble cream of tartar as a new excipient for making pills of substances not readily brought into the pill state, such as sublimated or precipitated sulphur, hydrate of chloral, Dover's powder, chlorate of potash, nitrate of potash, gallic acid, etc. Soluble cream of tartar consists of a solution of bitartrate of potash in biborate of soda and boracic acid, or biborate of soda and tartaric acid. This solution, when evaporated to the consistence of mucilage, is heavy and tenacious. With the addition, in some cases, of a small quantity of gum tragacanth, very fine pills can be formed out of the above drugs with this excipient.

Original Communications.

CONTRIBUTIONS TO THE SURGERY OF THE MALE URETHRA.

By CHARLES K. BRIDDON,

NEW YORK.

The following histories have been selected as illustrating some of the more important surgical affections of the male urethra. They were not recorded with a view to publication, but were preserved as facts which had proved instructive to myself, and which I think may be interesting to the practitioner of surgery. I do not maintain that in all these cases the line of treatment was the best that could be devised; some of them date back several years, during which time able and vigorous intellects have been busily at work in this domain of surgery, and much that was regarded as orthodox but a few years ago is frowned upon today. A short time ago it was considered necessary to have the bladder distended with fluid during the operation of Lithotrity; now the best and most experienced operators regard such distention as unnecessary, if not unwise. Within the present decade it was deemed proper to keep a solid catheter in the bladder after urethrotomy, and such procedure is no longer in use. Of late we have heard of no treatment for stricture but that by rupture or internal urethrotomy, Syme's operation being set aside for exceptional cases. I do not mean to insinuate that fashion influences our art, or that we run now in one groove, anon in another; such changes in practice must not be regarded as innovations, but as improvements resulting from the studious observation of cases, and will naturally claim a large share of the surgical mind; but new doctrines ought not to ignore the experience of the past, and I would not have my professional brethren think that I am an advocate in every instance for the more brilliant treatment of cutting or splitting; I should certainly only reserve such means for those cases that resist the time-honored bougie.

STRICTURE, COMPLICATED WITH A BOUGIE BROKEN IN THE BLADDER, AND CHRONIC CYSTITIS.

In the year 1867 —— Duncan, a man of 45 years, was sent to my office by Prof. Chas. A. Budd. The man was a resident of Williamsburgh, had had a stricture five or six years, and had been in the habit of passing a bougie for himself every day; three days before, he found greater difficulty than usual in introducing the instrument, and, on withdrawing it, to his dismay found that nearly half remained behind. This, of course, was a very serious matter to a poor fellow already worn out with the sufferings incident to chronic inflammation of the bladder; aid was summoned, and for three days unavailing efforts were made for his relief; when he came under my observation he was in a considerable state of excitement from the constant desire to micturate and the vesical tenesmus. He exhibited to me the portion of an English flexible bougie, size No. 3, that had come away, and I judged that there remained behind a piece four or five inches long. A sound introduced came in contact with a foreign body about five inches distant from the meatus. I tried with one of Civiale's instruments for removing impacted fragments of calculus, with long bullet forceps, and with a long and slender uterine tenaculum; but no effort of mine could dislodge it from its position, in which it appeared to be pretty firmly fixed. I then endeavored to push it into the bladder, hoping that I might remove it thence with a small Lithotrite, but in this also I failed; I then ordered a large dose of morphia, and directed him to hold his water as long as possible, and, when he could endure it no longer, to close the anterior portion of the urethra, near the meatus, by firm pressure with the finger and thumb, at the same time that he made the effort to expel the contents of the bladder, hoping that in this way the canal would be distended sufficiently to float the bougie within reach of instruments; but when I saw him next morning I found it still fixed in the same position, and I removed it through an incision into the walls of the urethra; after this I saw nothing more of the patient until 1868, when he took lodgings in this city to place himself under my care. The portions of his past history not already referred to are as follows:—He had gonorrhœa seventeen years ago, and in 1861 his stream began to diminish, and his bladder became so irritable that it would contain but two or three table-spoonfuls of urine. It has always been more or less turbid when passed, and very frequently bloody. His wife describes his sufferings as being on some occasions truly fearful, and on one occasion I myself witnessed his whole frame quivering in the efforts to expel the last drop of urine. The vesical tenesmus was of the most distressing character. On this occasion, however, he was in worse condition than usual, and I contented myself with prescribing enough McMunn's Elixir to keep him quiet, and absolute rest. In a few days he was much better, and I, upon examining him with a full-sized sound, found a stricture six inches from the meatus. Through this I could pass a No. 3 steel sound, and I determined that the speediest way to cure his cystitis would be to split the obstruction with the dilator, and then use the irrigateur. His urine was turbid, alkaline, deposited one third its volume of the usual ropy material so characteristic of these cases, and under the microscope presented innumerable pus and blood corpuscles.

On the 7th of October, Dr. R. W. Taylor administered chloroform, and I split the stricture with the largest of Holt's dilators; introduced easily a No. 12 catheter, and removed a quantity of urine of similar character to that met with on previous occasions. To prevent urethral fever, he was ordered two grains of quinine with ten drops of laudanum every three hours. I saw him on the following day, when he informed me that he had spent a better night than for many months, and in three days I commenced using the irrigateur. To detail the further progress of the case would be tedious; his bladder was injected every day with an amount of fluid varying with the irritability of the viscera; painful distention was never permitted, and the medication was varied. Commencing with a very dilute injection of nitric acid, I subsequently used acetate of lead, one quarter of a grain to the ounce; nitrate of silver, one-eighth of a grain to the ounce, and internally he first took Gross's favorite infusion of hops and uva ursi, pareira brava, and, as the tenesmus subsided, the terebinthinates. In a month he was sufficiently recovered to leave for his home, and I advised him to place himself in the hands of Dr. J. C. Hutchison, of Brooklyn, under whose skilful treatment he continued to improve, and eventually made a complete recovery.

The man Duncan called at my office, June, 1871, stating that he never had any relapse, that he could introduce a full-sized instrument with ease, and that he felt as well as he ever had in his life.

Note.—It will be noticed that in this case I used the French irrigateur. At that time I was in the habit of using that apparatus for injecting the bladder in all cases of chronic cystitis. With it, it is possible to inject the bladder so gradually and painlessly, that I preferred

it to the old method, but of late I have laid it aside; and use the method introduced and recommended by Sir H. Thompson.

TRAUMATIC STRICTURE COMPLICATED WITH CHRONIC CYSTITIS AND BRIGHT'S DISEASE—EXTERNAL URETHROTOMY.

Wednesday, January 31st, 1861, I was consulted by Dr. Jno. Bishop, in reference to the case of James Nolan, living at No. 10 State street; patient was an Irishman by birth, 30 years old, a 'longshoreman by occupation, and married. Three years ago he fell with his perinæum coming in contact with the chine of a barrel; the injury was followed by hemorrhage from the urethra and trouble in passing his water, which induced him to enter a hospital, where he remained three months, during which time dilatation was resorted to. After leaving, he used no precautions against relapse, and gradually fell into his

Present Condition.—He is of spare habit, looks worn-out from constant suffering, has a small, frequent pulse, and a cracked tongue, red at its margins and tip, and dry behind. He has an irresistible desire to evacuate the contents of his bladder every hour or hour and a half. When the desire becomes imperative, several minutes of laborious effort are necessary before the stream begins to flow; it is fine, not larger than a knitting-needle, and is considerably distorted. The urine is very turbid, resembling thin pea-soup, and deposits a large volume of muco-pus, which, on subsequent examination under the microscope was found to present in large numbers pus and blood corpuscles, with epithelia from all portions of the urinary tract, and a few granular casts; a dense resisting stricture was met with six inches from the meatus, which would only admit a No. 2 steel sound.

Dilatation had succeeded only in affording temporary relief. The stricture presented in a marked degree the characteristic features of all such obstructions having a traumatic origin; the cystitis was of a very severe character, and, from the character of the deposits presented under the microscope, I had reason to believe that the kidneys were involved, and that he probably had pyelitis. The doctor had tried all the usual internal remedies without avail, and, unless some other more effectual means were used, it was plain enough that the patient must soon succumb to the disease. Well aware that degeneration of the kidney is, with good reason, regarded as a contra-indication to any operative procedure of magnitude, I concluded that dilatation was as dangerous as the simple operation of external urethrotomy. Such a simple incision would at once admit of the immediate application of remedial agents, and, as it was evident that he must sooner or later die of the more serious complication, the pressing indication was to relieve his sufferings, which of course were all referred to his bladder. Accordingly I proposed the operation, and it was done, February 7th, in the presence of my friends Drs. Godfrey Aigner and Jas. L. Banks. I should have stated, in referring to this man's present condition, that he had a fistula situate in the mesial line, one inch in advance of the anus. It had not discharged for some time, and its external orifice was now closed. Ether was administered, and with some difficulty a No. 2 grooved steel sound was introduced; an incision two inches long was made along the raphé, terminating immediately in front of the anus, and was carried down to the bulb. Experiencing some difficulty in the attempt to open the urethra behind, I exposed the canal immediately in front of the stricture, and finished the operation by passing a tenotomy knife along the groove in the sound onwards and into the dilated portion behind; a large-size catheter was then introduced and rigged in position, care being taken that only its eye was lodged within the bladder; on the following day I found the patient as before; his desire to evacuate was as frequent and imperative, and he still had to make powerful efforts of several minutes duration before the stream flowed. I removed the catheter, and in three days introduced it again, and injected the bladder with a solution of acetate of lead, one grain to four ounces, and at a temperature of 100° Fahr. Internally he was taking buchu, uva ursi, and henbane at bedtime as a substitute for opium, which appeared to aggravate by prolonging the efforts he had to make before the stream flowed. The same effects followed the use of the drug when introduced into the rectum.

This treatment was continued until the 13th, and without any amelioration in his symptoms. The perineal wound was nearly cicatrized; there was no difficulty at all in introducing the catheter; the vesical tenesmus about the same, but no improvement in the expulsive power. The urine was still thick and turbid when passed, and contained the same microscopic elements as before, with, I think, an increase in the number of casts. I stopped the acetate of lead injections, and commenced using nitrate of silver, and ordered small doses of copaiba three times a day, with decoction of pareira brava.

Patient expressed himself much relieved by the injections, and they were continued until the 26th, when he had an attack of articular rheumatism, which subsided in a few days under the use of aconite, but he was left in a very low condition, and his legs were beginning to pit upon pressure; the wound in the perinæum was now healed, and he could retain his urine about two hours. I commenced again with the injections, and put him upon the use of muriated tincture of iron, and this treatment was persevered with until the close of the month of April, when he had an attack of uræmic convulsions, and died comatose.

I have reason to believe that simple dilatation is not without its dangers in the treatment of stricture, complicated with degenerated kidneys; in fact, I have recently seen a case in which those organs were sound, and yet in which the introduction of a sound two sizes in advance of the one previously used was followed by rigors, urethral fever, and suppression; and, inasmuch as the case may be instructive, I will give it *in extenso*.

STRICTURE OF URETHRA—ALARMING SYMPTOMS FOLLOWING DILATATION.

The patient, Wolf, was placed in my charge by Prof. Charles A. Budd, in the fall of 1870. He was a man of about forty years, stout built, and had been a pretty free liver. He had been troubled with stricture for many years. On examination I found three contractions: one four inches from the meatus, another about an inch and a half anterior to the bulb, another at the junction of the bulbous with the membranous portion. The two latter were old, dense, and resisting; the one on the penile portion was, I think, of more recent origin. The integuments constituting the prepuce and the anterior portion of his scrotum were sodden and infiltrated from constant contact with urine, which leaked to such an extent that he had to keep the parts covered with several folds of linen. I was able to introduce a fine filiform flexible bougie, and continued the dilatation, so that, by the month of April, 1871, he was using No. 13 English bougie, and on the 1st of May I introduced a No. 16, and, as the instrument was passing the second stricture, I felt an obscure sensation of rending. I immediately withdrew the instrument, and there was hemorrhage to an insignificant amount. This occurred at 10 o'clock A.M. At 4 o'clock P.M. he passed his

urine, and had a pretty severe rigor. When I saw him shortly afterwards, he informed me that the same thing had occurred to him in Australia, when his life was despaired of. His pulse, on this occasion, was small and frequent, and he had vomited several times; I saw him again in the evening, the vomiting had not yielded to the means used, and I began to fear that it was uræmic. I applied cups all over the lumbar region, and put him in the hot-air bath, and on the internal use of acetate of potash and spirits of nitric ether. His bladder was empty, and remained so for thirty-six hours, when he passed about two ounces, which was slightly albuminous; it now, however, gradually became free, and after twenty-four hours more was secreted in excess, and was no longer albuminous.

TRAUMATIC STRICTURE—CONTRACTION AFTER DILATATION —EXTERNAL URETHROTOMY.

Feb. 17, 1859, I was requested to see I. F., a young boy of only fourteen years, who, in an excited attempt to escape from premises where he had no business, fell astride a fence, and contused his perinæum so violently that he had some trouble in reaching his home, distant only a few blocks. On taking his clothes off his mother noticed that his shirt was bloody, and that there was a little blood issuing from the meatus. He, however, passed his urine without any great difficulty, and, though his scrotum and perinæum were considerably swollen and discolored, in two weeks he was able to resume his occupation as an errand-boy. Six weeks after the accident he began to have trouble in passing his urine, and this trouble gradually increased until, at last, his mother was compelled to send him to a hospital, where he remained some months, undergoing treatment by dilatation; and on leaving the institution he was provided with an instrument, and instructed to pass it three times a week. These instructions he complied with but a few weeks, and on again trying to introduce it he found it impossible, and gradually relapsed into the condition he was in before dilatation was commenced.

Present Condition.—Just arriving at the period of puberty, he is a fine, intelligent lad, of spare habit, and appears to be in the possession of sound health. He says that his stream of urine is now very fine, not larger than a hair-pin, that he cannot throw it any distance, that it is distorted, and that it dribbles away in his pantaloons after he has done. He is not disturbed at night, and only occasionally is the desire to pass it in the day time more frequent than formerly. On external palpation, I could detect nothing abnormal in the perinæum, but I could pass nothing through an obstruction situated at the junction of the bulb with the membranous portion of the urethra but the smallest-sized steel sound, and could only succeed in introducing that after a long trial, and with the left fore-finger introduced into the rectum. His urine was normal, and for some weeks I endeavored to dilate, but only succeeded in reaching No. 4 of the English scale, and I concluded to perform the operation of perineal urethrotomy.

March 23. The patient was placed under the influence of ether, in the position for lithotomy, and a grooved sound was introduced and held in position by my friend, the late Dr. Harriot. The boy was so thin that I could readily feel and trace the small sound to the point where it passed through the deep perineal fascia, and believe that I could have made the operation a subcutaneous one, and considered the propriety of doing so, but, fearing that a free incision into the urethra with a very limited one on the surface might be followed by pent-up secretion of either blood or urine, I performed the usual operation without difficulty, and had no trouble in then introducing a No. 10 silver catheter, which was securely rigged in position, and left there for a period of forty-eight hours, after which it was introduced every other day, then twice, and subsequently once a week. On one occasion it was omitted for two weeks, and I am sure that the disposition to contract still persisted, for I had some trouble in introducing the same sized instrument. However, the boy could now accomplish the introduction of a sound with all the dexterity that was required, and he was left to his own resources; but I lost sight of him, and whether he remained master of the situation, or whether he relapsed and passed into other hands, I cannot say.

STRICTURE—URINARY ABSCESS — RETENTION — ENGORGED BLADDER—EXTERNAL URETHROTOMY WITHOUT A GUIDE —RECOVERY.

On the 6th November, 1870, my friend Dr. Stephen J. Clark was consulted by a neighboring physician in regard to a bad case of retention, and in the evening of the same day I met the gentleman in attendance, and elicited the following history: The patient had had a urethral obstruction for at least three years, and during the last twelve months had suffered very severely in consequence, at times only being able to void his urine in drops; and I was assured that for many months he had not passed anything like a stream. About eight days since, after getting wet, his symptoms became aggravated, and he felt some uneasiness and swelling in the perinæum. His efforts to empty his bladder were unceasing and unavailing until three days ago, when the urine began to drain away involuntarily, and he had some respite from the torments of tenesmus. Whether this was occasioned by the relief afforded by the overflow or drainage, whether the expulsive efforts increased the then persistent pain and tenderness, and compelled the man to control them, or whether true atony of the bladder from over-distention was the condition, I am not prepared to say, but am inclined to believe that the overflow was sufficient to account for it. I found the patient, William Stephens, a man of 27 years, of spare habit, and with a careworn face, lying on his back, with his knees drawn up; and, on my asking him why he selected that position, he replied that it hurt his belly to straighten them out. His tongue was covered with a yellowish pasty fur, and his pulse, of moderate volume, beat 110. On turning down the bedclothes, a strongly urinous odor was observed, and the bed beneath was soaked with the secretion, which could be seen trickling down from the meatus. The distended bladder stood out prominently, filling the hypogastrium well-nigh to the umbilicus. It was dull on percussion, and remarkably tender; his scrotum was swollen to the size of the fœtal head at term, tense, and on its surface were several large bullæ. On examining the perinæum, it also was found distended to the utmost limits of the perineal fascia, and was everywhere tense and resisting. On exploring the urethra, a dense obstruction was readily detected at six inches from the meatus. The diagnosis was, organic stricture complicated with acute urinary abscess, engorged bladder and stillicidium from overflow. The indications were, to make a free exit for the abscess in the perinæum, which would also afford an outlet for the contents of the bladder, leaving the treatment of the urethral obstruction for after-consideration. I accordingly made a free incision along the raphé, reaching from the root of the scrotum to the verge of the arms, and then prolonged the incision upwards into the scrotum. This gave vent to a large quantity of offensive sero-purulent fluid, and I thought

the size of the hypogastric tumor was somewhat diminished. The parts were directed to be assiduously fomented, and he was left for the night. The next evening Dr. Clark called at my house, and informed me that the patient's bladder was still full, its fundus reaching to a level with the umbilicus. I was much surprised at this information, for I quite expected that the bladder would relieve itself through the incisions made in the perinæum. However, I appointed a meeting at an early hour on the morning of the 8th, when I met Drs. Clark, Chas. S. Ward, and McDonough. I found the patient's general condition about the same. The bladder was as I saw it on the evening of the 6th, and its contents were percolating through the urethra, and not through the perinæum. I had him brought into a room where there was a tolerable light, placed upon a table of convenient height, and put under the influence of chloroform. After a long and tedious trial with every conceivable form of guide, bougie, and catheter, I came to the conclusion that the stricture was impassable to instruments, at least in my hands, and I determined to perform the operation of urethrotomy without a guide, and had him placed in the lithotomy position for that purpose. On exploring the field of operations, I was immediately convinced that my knowledge of the anatomy of the parts would serve me but little; the region of the perinæum, including the lower third of the scrotum, was one large gaping wound, covered with a stinking pultaceous deposit. After some careful dissection I opened the bulbous portion of the urethra, secured its walls, held on either side by my assistants,* but could pass no probe through the obstruction. I then carried on the dissection through the callous indurated mass that formed the track, and at last succeeded in introducing a fine director, on which I passed the knife onwards into the urethra behind. In making this last incision I divided an artery that jetted a stream as large as a knitting-needle, and which, I suppose, was the artery of the bulb. I experienced considerable difficulty in controlling the hemorrhage from this source. By forcibly separating the parts, I could easily reach the bleeding orifice with a tenaculum, and over this I could as easily apply a ligature, but, on tightening, it came away, and it was only after three or four failures that I at last succeeded in arresting all bleeding. I now easily passed a No. 12 silver catheter into the bladder, and evacuated a large quantity of urine. It was rigged in position, and that was the last I saw of the patient.

The catheter was secured in the bladder in this case for two reasons: first, I apprehended there might be hemorrhage from the vessel opened in the bulb, and that it might be necessary to pack the wound; and secondly, the gentleman who had charge of the case was not familiar with manipulations about the urethra, and I feared he might be foiled in his attempts to introduce an instrument. At all events, I thought it prudent to guard against all accidents.

Four days after the operation I saw Dr. Clark, and asked him to see the physician in charge of Stephens, and suggest to him the propriety of substituting one of Holt's self-retaining catheters for the metal one, and of further advising the daily injection of the bladder with tepid water slightly acidulated with nitric acid. Dr. Clark was kind enough to introduce the flexible instrument himself, and he saw no more of the patient until the 27th (a period of fifteen days). During the interval the man was under the care of his original adviser, who neglected to inject the bladder, and who had in fact seen but little of him. I recommended the immediate removal of the catheter, and apprehended that after so long a sojourn it would either give way in its removal, leaving a fragment in the bladder, or that its point, incrusted with urinary salts, would lacerate the urethral walls. Dr. C. removed the instrument himself, and had to desist from a first attempt, on account of pain. His second attempt was whilst the patient was under the influence of chloroform, and he said the strain the instrument bore was really astonishing. It, however, stood the test well, coming out entire, with an inch and a half of the extremity thickly incrusted with urinary salts, but its removal was followed by a pretty free hemorrhage, which lasted a short time.

At the time of closing this report, June 1st, I am informed that the man is entirely well, the perineal wound long since entirely healed, with no fistulous openings, and with a urethral canal through which he readily passes the largest sized sound.

(To be continued.)

* After the urethra is opened, the most important step consists in bringing the stricture well into view. The field of operations is necessarily a contracted one, and the fingers of assistants and retractors are in the way, and, no matter how intelligent they may be, they do not act with that precision and unity of action that is desirable. Mr. Avery has suggested a loop of thread passed through each margin of the urethral incision, so as to open the passage without intercepting the view. I propose that the operator have in his case half a dozen of the largest sized musket-bullets, each with a hook attached, and that one or two of these, as may be necessary, be hooked on to the ends of the loops, which should be full 18 inches long. The loops, with the weights attached, may then be slung over the patient's groins, or over the corners of the table, according as it may be desirable to elevate or depress the parts at the same time that they are brought forward.

REMARKS ON CYSTOTOMY.

By H. K. CLARKE, M.D.,
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The annals of Surgical Literature have recorded no case more remarkable in connection with the subject of urinary retention than the following which recently occurred in the practice of Dr. George N. Dox, of Geneva, N. Y., and which, for the plan proposed and carried out to such success, deserves a wide-spread record, that perchance the operation may be so modified as to secure better results than have heretofore attended it.

When enlargement of the prostate occurs to such an extent as to preclude access to the bladder by catheterization, it has been the habit, and has the sanction of authority to the procedure, to puncture the bladder generally above the pubis, in the median line and low down, leaving the canula in the opening. Such cases, too, if I possess a correct idea of the operation and its results, are usually considered of a desperate character, either as affecting the life of the patient, or as dooming him to a continual voidance of his urine through an artificial opening.

The results obtained in the following case are of such a character as to divest the operation of paracentesis cystitis of its graver features, and exhibits the fact that puncture of that viscus in retention, when other means fail, is almost entirely void of danger and can be repeated *ad libitum* without any serious consequences ensuing. A. W., a farmer aged seventy-five years, in the enjoyment of excellent health, was seized with retention of urine on the morning of March 19; after many ineffectual efforts to relieve himself, and the bladder becoming distended, Dr. George N. Dox was sent for, and made a careful examination of the case. Rectal exploration revealed the cause of the difficulty; the prostate was inordinately enlarged, tumid, and tender; an hour and a half that morning was spent in unavailing efforts to introduce the catheter. He was then left for about two hours; when seen again, Dr. H. N. Eastman being in consultation, the patient was chloroformed, and gentle but continuous effort made to introduce

the catheter for nearly an hour; all efforts, however, failed. The bladder now appeared as a hard, firm tumor, reaching to the umbilicus; the suffering was intense. The symptoms thus being of the most urgent character, it was determined to puncture the bladder above the pubis; this selection was made, as I believe it always should be in such cases, on account of the danger of wounding the peritonæum by an operation through the rectum, and the difficulty of the procedure when the prostate is engorged and tender. The operation was performed in the usual location, low down, but modified in three ways: in the first as to the selection of the instrument; in the second as to the manner of its performance; and in the third, as to the method pursued after escape of the urine. The instrument selected was a small-sized trochar, having a diameter of one-twelfth of an inch—nothing more nor less than a good-sized exploring trochar instead of the larger instruments ordinarily used for the purpose. This I consider extremely essential, for it modifies by its smaller size the whole result of the operation, as it does the success of each step. All surgical authorities whom I have had the privilege of consulting, direct an incision to be made directly to the muscular coat of the bladder, the trochar then to be plunged in, and the canula left remaining. Owing to the size of the instrument used in this case, no incision was made; it was simply thrust through the abdominal walls into the bladder and the urine drawn off. About two quarts of clear urine escaped; four or five minutes being consumed in the withdrawal of it, within which time the patient fell asleep. The canula was then removed, and with a few powders of morphia to allay pain—should he still find it impossible to void his urine—the man was left, to be seen on the morrow. During the night of the 19th, the 20th, and the night of the 20th the urine steadily accumulated without power of micturition returning. Early on the morning of the 21st I, being a partner of the Doctor, visited him, and finding him in much suffering, walking about the house in his uneasiness, and the bladder tense and full, punctured again, he sitting upon the edge of the bed, and drew off about two quarts of clear urine, afterwards withdrawing the canula. Before the operation I looked for the point of previous puncture. It was so indistinct I could scarcely designate it. The patient bore the operation well, although it took considerable force to thrust the instrument in, as before no incision having been made. After the operation he got up, put on his clothes, and expressing himself as feeling much better, walked about as usual. His tongue being rather coated, and no movement of his bowels having taken place in several days, I gave him three Co. Cath. pills, and also left powders of morphia to allay pain, if the bladder should again fill without ability to void its contents. This occurred early on the morning of the 22d. Dr. Dox was sent for to relieve him of his suffering. He found him uneasy, but pulse good; bowels had responded to the pills, but no urine passed since it was drawn off the morning before. He was dressed and walking about the house, and notwithstanding his pain, in good spirits, making jocular allusion to his novel mode of urinating. His family said his appetite was good. He ate at the table with them and of what he wanted. The bladder was found distended, and the trochar plunged in again, no regard being had to point of previous entrance; two quarts of clear urine escaped. On the evening of the same day, catheterization was again attempted, but failed of success. On the following morning it was found necessary to puncture again; the same amount of urine was drawn off as at previous times. During the twenty-four hours that elapsed between the last two operations he used no morphine, yet slept and ate well until over-distention renewed his suffering. On the morning of the 24th he was placed in a hot bath, and efforts made to introduce the catheter; they again failed; nothing further was done at that time, there being no uneasiness. Thirty-five hours from the last operation, on the evening of the 24th, the trochar was again used as before; two quarts were again removed, clear and without sediment. I should have said on the 23d he passed a tablespoonful of urine per urethra, and on the 24th a teacupful; appetite still good, and he appears as well as ever. Early on the morning of the 26th, renewed attempts at catheterization failed of success, although there were evidences of improvement in the condition of the passage. He was suffering no pain or uneasiness, and had passed off at one time in quite a stream about one half-pint, and at another about a gill of urine; no perceptible distention of bladder. Quite early on the morning of the 27th, the doctor was called, and found considerable accumulation and some pain; he had now gone sixty hours without artificial relief. In the early part of the night he had passed naturally about a quart; he was again punctured, and two quarts taken from him. This was the last operation performed on him; after it nothing was heard of him till a visit was made on the 31st. He was found up and around as usual, with excellent appetite, and voiding his urine as he ought, except a little more frequently than usual; the prostatic irritability not having entirely subsided. He is at the date of this writing as well as usual.

The frequent puncturing of the bladder in this case gave rise as you have observed to no evidences of inflammation or urinary infiltration. The questions that suggest themselves then are: First, what causes conspired in this case to prevent the usual disastrous sequelæ of such operations? and, Second, can we reasonably predicate success in future cases of like character, when a similar course is pursued? In answer to the first, it can be said the patient was not debilitated by disease or excess, but was strong and robust for one of his time of life, and the operation was performed early, before the bladder by long-continued over-distention had become paralyzed. The puncture too was made by an exceedingly small instrument, thus insuring the least possible wound and the most rapid repair. Cutting through the intervening tissues to the external coat of the bladder, as advised by Cooper, Liston, and in fact all the surgical authorities I have consulted, was, as before stated, not practised. To these causes combined, and to the immediate withdrawal of the canula, I consider the success in this case attributable. This brings us to the consideration of the second question:—as to the probabilities of success in the future, a like course being pursued. Certainly it would be chimerical to expect a like result in every case, simply from the success of the plan pursued in this; numberless causes might conspire to prevent; but is this operation of paracentesis cystitis any more dangerous than paracentesis abdominalis or thoracis, in fact is it as dangerous as we have believed it to be? Is it not true that the time and manner of its performance has proved its direct cause of defeat? I cannot think there is much danger in this operation if performed early, before the bladder has become too distended, and the operation of the vital forces stifled or at least impaired by uræmic poisoning. As performed by Dr. Dox, it is simple, bloodless, expeditious and complete. Influenced perhaps too readily by this solitary case, I confess I may be too sanguine of success in the future. But why should not infiltration have occurred in this case, if it will in any? Simply because he was relieved before the organ lost its power of contractility. If you wait too long, and cut down as directed, you may

almost certainly expect urinary infiltration and death. Should a similar case occur in my own practice I should puncture without fear or hesitation.

GENEVA, May, 1872.

Progress of Medical Science.

TESTS FOR DETECTING STRYCHNIA.—The *Popular Science Review* states that Dr. Filhol, in a recent paper on this subject, maintains that strychnia should, in cases of poisoning, be obtained in the solid state; the alkalinity of its solution should be ascertained as well as its intensely bitter taste; its behavior with chlorine, and its blue coloration under the influence of sulphuric acid and oxidizing substances, should also be seen; while, lastly, as a very delicate reaction, Dr. Filhol observes that, with chloride of gold, strychnia (in solution) yields immediately a crystalline precipitate which, although slowly, is distinctly formed in solutions containing one-tenth of a milligramme of the alkaloid. This precipitate, and that formed with chlorine, are at once dissolved by concentrated sulphuric acid, and chromic acid being added, the well-known blue coloration that strychnia yields with this last reagent is produced. The presence of alcohol in liquids to be tested for strychnia should be avoided.

MODE OF RENDERING FABRICS NON-INFLAMMABLE.—A short time since we noticed the experiments with tungstate of soda in Germany; since when the *Annalen der Chemie* contains a review of the subject by A. Patera, who thinks, that although the tungstate is an excellent substance for producing the effect desired its expense is an objection, and recommends for it a cheaper material, viz., a mixture of four parts of borax and three parts of sulphate of magnesia. These salts are mixed together just before being required —otherwise, insoluble borate of magnesia is formed too early—and then dissolved in from twenty to thirty parts of warm water, into which the fabrics are to be immersed, next wrung out, and then dried. A mixture of sulphate of ammonia and gypsum may be used for coarse fabrics.

THE WORTHLESSNESS OF BEEF-TEA.—The experiments of Gustav Bunge lead him to conclude that the common opinion that beef-tea and extract of meat are as valuable articles of diet as tea, coffee, or alcohol is totally unfounded; that the refreshment they give is only due to their warmth and pleasant taste, and that their chief value is that they enable a person to take with appetite a larger amount of dry or tasteless food than he could otherwise do. The statement of Liebig, that the addition of some meat-extract to vegetable food increases its nutritive value, and that the extractive matters of meat, and especially creatine and creatinine, are the materials for muscular work, have been disproved by Voit and Meissner; and the idea that beef-tea and meat-extract were beneficial on account of the salts they contain is an unlikely one, as these salts are already present in excess in ordinary food. It has been said, however, that they do good by acting as stimulants, like coffee, tea, and alcohol; and this seemed to be confirmed by the experiments of Kemmerich, who found that small doses of meat-extract quickened the pulse, but large ones produced paralysis of the heart and death. Kemmerich attributed this action on the circulation to the potash salts contained in the extract, as the ash alone produced the same effects as the quantity of extract from which it had been got.

As Traube, Gultman, and Podkopaen found that potash salts slackened the pulse, but never quickened it; and as Kemmerich's experiments on man gave an indefinite result, and the only animals he used were rabbits, Bunge investigated anew, in Prof. Schmiedeberg's laboratory, the actions of meat-extract and of potash salts on man, dogs, cats, and rabbits, and determined that the quickening of the pulse depends not upon the action of the potash salts but upon the distention of the stomach, this result being present when simple water was used, and was more persistent when a solution of salt or sugar were substituted for simple water. He also found that these salts were quite insufficient to produce poisonous symptoms in the human subject.

TREPHINING OVER A LATERAL SINUS.—Professor Paul F. Eve reports, in the *Richmond and Louisville Med. Jour.* of May, the following case of this nature: A stout and healthy man, of 42 years, was struck two years and ten months ago with a bludgeon, and suffered a fracture of the skull which rendered him insensible for sixteen hours. The depression was at a point midway between the occipital protuberance and the right external auditory meatus, and was about three-quarters of an inch in depth, and of the circumference of a silver half-dollar. No symptoms of epilepsy followed, but at the date of the operation (October 28th, ultimo) the patient was habitually costive, walked with difficulty, and only for short distances; complained of constant weight and oppression in his head, and of a dull, annoying pain, radiating at irregular intervals from the point of the injury; had lost his energy, was never cheerful, and was losing flesh and strength. Nothing could provoke a smile. He was almost without hope, and said that he occasionally felt like losing his senses. At the date above-mentioned, a crucial incision being made over the depressed portion of skull, the insertion of the trapezius and the occipital portion of the occipito-frontalis was raised—thus getting below the superior curved line of the os occipitis; a half-inch Galt's trephine was applied and a button of bone removed without injury to the dura mater. Three discs of bone were thus removed from over the right lateral sinus, which was readily recognized by the deep color of its venous blood; the angles left by the instrument were trimmed and the flaps replaced, and secured with silver wire. About five ounces of blood were lost and only one artery ligated. The patient expressed himself as feeling better as soon as he recovered from the effects of the ether. Most rigid after-treatment was pursued. A slight reaction on the following day was checked with sulphate of magnesia, and he subsequently experienced not a serious symptom. The wound was kept open for a month by the daily introduction of a blunt probe. The skull, in this case, was found to be unusually thin.

ARTIFICIAL FECUNDATION.—Dr. Roubaud, of Paris, a well-known writer on such subjects, has been making some experiments on artificial fecundation similar to those of Dr. Marion Sims and Dr. Courty of Montpellier. In the *Mouvement Médical*, of April 14th, is figured a syringe which he uses for the purpose. Of the cases in which resort has been had to this procedure, which have been narrated of late years, twelve successes have been recorded by different experimenters.

TREATMENT OF ARTICULAR RHEUMATISM BY ICE.—During the past winter there were presented at the Strasbourg *ambulances* four cases of acute rheumatism which were treated by ice alone. In the first there was great pain in the joints of the feet; during the day the affection extended to the knee-joints, where ice was locally applied. On the next day the upper extremi-

ties also became painful, and the pulsations of the heart were weak, the first sound being accompanied with a murmur. All the painful articulations were covered with bladders containing ice. On the fourth day the pain had almost disappeared; on the fifth the pulsations of the heart were normal; on the sixth there were no longer any local symptoms; on the seventh the fever had ceased.

Two other cases were similarly followed by equally favorable results in the space of four days. In a fourth case ice was not used until the fifth day, but in four days after this the pain had disappeared with all the other symptoms. Before the ice was applied the temperature increased gradually, but after its application it became lower. The author (Dr. Esmarch) says that he would not hesitate to use ice even in gout; and as to the metastasis of rheumatism to the brain, he considers this to be the effect of the temperature. At Kiel there was received into the hospital a patient with rheumatic delirium, and with a temperature of 43° C. He was immersed in water, and a cure took place. The application of cold should be continued until all symptoms disappear, and should be used in the form of ice-bladders and not in cold compresses, as recommended by Priestnitz.—*Gaz. Méd. de Strasbourg* and *The Doctor*.

The Pulvis Glycyrrhizæ Compositus of the Prussian Pharmacopœia.—*The Practitioner* of May has an article by Dr. Page on the use of this remedy as a mild but effective aperient, of convenient form and without any of the disagreeable concomitants of most preparations of this class, the want of which frequently confronts the physician when he casts about him for something with which to treat a case of simple constipation. "For the treatment of simple constipation resulting from atony of the bowel, the compound liquorice powder is admirably adapted. Whether in simple, uncomplicated torpor of the intestines, or in constipation accompanying temporary gastric disorder, the powder, alone or auxiliary to appropriate remedies, is preferable to other preparations of its class. In the former our object is rather to call into play the peristaltic action of the intestine than to deplete by serous transudation from its walls, and in the latter especially, no prudent practitioner would run the risk of aggravating the disordered stomach by the exhibiton of purgatives possessed of irritant or drastic properties. The compound liquorice powder is composed of the following constituents, so prepared as to form, when incorporated, an almost impalpable powder:—Senna leaves, ℥ vj.; Liquorice root, ℥ vj.; Fennel seeds, ℥ iij.; Sulphur, ℥ iij.; Refined sugar, ℥ xviij.

The active ingredients are the sulphur and the senna. The usual dose is a small teaspoonful at bedtime, in water, with which it is easily miscible, forming an agreeable draught. Children take it readily with the belief that it is a sweetmeat.

The Alcoholic Treatment of Wounds and Atonic Sores.—Mr. Thomas Cooke, Assistant Surgeon to Westminster Hospital, contributes to the same number of *The Practitioner* some of his experience with the above dressing, learned by him from Drs. Nélaton, Marc Sée, and Dolbeau, of Paris. He says: "To state at once the position I take, I will first transcribe, with merely a few *italicised alterations*, the series of advantages (claiming the same for my dressing) which Dr. Newman claims for Mr. Lister's mode of treatment: 1. The dressing is clean, inodorous, and singularly painless, *except on the first application*. 2. The formation of pus as a consequence of the injury, surgical or accidental, is, with due care, prevented *to a very great extent*. 3. Erysipelas and pyæmia, if not absolutely extinguished, are very rarely seen. 4. The wounds are free from irritation; no swelling of incised integument and no local redness are to be noticed. 5. There is usually no constitutional disturbance (traumatic fever) after even severe operation. 6. The wounds heal rapidly.

The mode of performing an operation and the making of the subsequent dressing, as contrasted with Mr. Lister's mode, are detailed as follows:—

1. The abscess is opened in the usual way; any clean knife will do for the purpose. 2. The wound is to be washed first with tepid water, then with the spirit lotion. 3. A pad of lint or some tow dipped in the lotion is to be applied to the wound, and if the cavity of the abscess be large, partly introduced into the same. 4. A piece of gutta-percha tissue or oil-cloth is to be placed over the lint or tow, and a common bandage is to be applied. The "spirit lotion" used by Dr. Nélaton was "alcohol camphré," which is nearly similar to the spiritus camphoræ of the Br. P.; Dr. Sée uses pure, undiluted alcohol; Dr. Dolbeau, the same diluted with half water. My spirit lotion is composed of equal parts of methylated spirits and common water."

Speaking of the results of this mode of dressing, he says:—I have had under my care large flaps of the scalp which have adhered in two or three days to the denuded calvarium, and suppurated only slightly along their disunited margins. I have had cases, where the walls of an hematic abscess, situated beneath the tendon of the occipito-frontalis muscle, have adhered in three or four days. I daily see suppuration most rapidly diminish, and cicatrization, almost without any further suppuration, ensue in consequence of alcoholic dressing in what was, the day before, a large suppurating and inactive sore.

The Action of Large Doses of Quinine.—*The Lyon Médicale* for February has an article by Prof. Binz, of Bonn, on the accidents which may result from the use of large doses of quinine. While advocating the use of single large doses, even as high as 15 to 20 grains, rather than repeated small doses, he calls attention to the unfavorable effects which may result in exceptional cases.

Deranged action of the nervous system and of the heart. These cases are of tolerably frequent occurrence. In one instance in which three drachms were taken by mistake, there followed in the course of an hour pain in the head and stomach, vertigo, prostration, loss of consciousness, lividity of the lips, and coldness of the extremities. The pulse was slow and regular, and almost imperceptible, the respiration languid, and pupils widely dilated. Frictions and hot cloths with stimulants internally brought about reaction, and by the fifth day the patient was able to sit up. Sight and hearing were greatly impaired for a considerable time.

In animals poisoned with quinine the heart is found dilated and insensible even to the stimulus of electricity. Thus it appears that while in small doses the drug acts as a cardiac stimulant, in large doses it tends directly to repress the action of the heart. This suggests caution in the use of large doses when the heart is enfeebled, or when additional labor is thrown upon it.

Impairment of hearing. The deafness produced by quinine generally subsides with the other symptoms of cinchonism, but in rare instances it persists for a considerable time, or may even be permanent. A patient having a congestive chill took 90 grains during the succeeding intermission. Another chill following, the same doses were repeated. No other paroxysm occurred, but the patient was left perfectly deaf, and has remained so up to the time of writing, a period of ten

years. In another case, in which the quantity given is not stated, the deafness continued three weeks.

Loss of the power of speech is occasionally observed, but it is usually of short duration.

Disturbance of vision. Four cases are mentioned in which complete amaurosis resulted from the daily use for several days of from 45 to 75 grains. In two of these cases the amaurosis continued only one day. In one case it persisted for a month.

Graefe gave 45 grains daily for a week, causing feebleness of vision in one eye, which continued for four months, when the patient was lost sight of.

In another case in which about 13 grains were given daily for a long period, there followed complete loss of sight in one eye, which was relieved after six weeks by local depletion.

In a few cases hemorrhage from mucous surfaces, and an erythematous or pruriginous eruption on the skin have been observed to follow the use of large doses.

Irritation of the digestive organs so often observed, will, he thinks, be almost always avoided by giving the quinine in solution.

Albuminuria is occasionally produced when the kidneys are required to eliminate a large quantity of quinine. It ceases, however, when the medicine is suspended. Vesical catarrh has also been observed to follow under similar conditions.

The Sulphites and Carbolic Acid in Intermittent Fever.—Dr. H. C. Wood, Jr., of Philadelphia (*Medical Times*), in a discussion on "Certain Human Parasitic Fungi and their Relations to Disease," observed that during the past few years he had enjoyed very extensive opportunities of observing intermittent fever in the Philadelphia and Episcopal Hospitals, and had experimented upon a great number of cases with the sulphites and with carbolic acid. The conclusions at which he had arrived were, that the latter of these so-called remedies had no more effect in checking the disease than so much cold water, and that the former were almost, but not quite, equally inert. He had, however, found arsenic to relieve very obstinate cases of ague, with great certainty.

Management of Intermittent Fever with Wahoo.—Dr. C. Richmond, of Kokomo, Ind. (*The Indiana Journal of Medicine*), says that his attention was early directed to the use of *euonymus atropurpureus* in the treatment of dropsy, and believing that enlargement of the spleen, in connection with intermittent fever, is mostly of a dropsical character, he has been more successful in removing the enlargement with this remedy than with any other. The "fluid extract" is not as reliable as the infusion of the fresh bark—two ounces of the fresh bark of the root to one part of boiling water. Of this, when cold, from half a pint to one pint should be given each day. Given warm, and in ʒ ij.-doses every hour or two, it will generally procure several large watery alvine evacuations. Taken in half the quantity, or every three or four hours, it will act as a diuretic, and should be continued for days, if necessary. He generally gives the remedy until it purges at first; then as a diuretic and tonic. Quinine can be given at the same time.

A New Mode of Administering Copaiba.—In chronic cases of gonorrhœa J. H. Wehner, M.D., Germantown, Pa. (*Medical and Surgical Reporter*), has obtained the best therapeutical action of copaiba, with the entire absence of its nauseating and other disagreeable effects, from the administration of that drug, combined with opium, in the form of a rectal suppository. The subjoined formula is recommended: ℞ Copaiba, fʒ vj.; Opii pulv., gr. vj.; Olei theobromæ, Cetacei, *aa* ʒ iss.; Ceræ albæ, gr. xl to lx. M. ft. suppositories No. xij. S. One to be introduced into the bowel morning and night.

If constipation occurs it may be readily overcome by a moderate dose of Rochelle salts.

Causes of Laryngeal Growths.—Morell Mackenzie, M.D., London, M.R.C.P., in his "Essay on Growths in the Larynx," says that chronic congestion of the mucous membrane of the larynx is, far above all other causes, the most important etiological feature in the production of simple morbid growths in the larynx. In some cases the disease appears to originate in an acute or subacute form of inflammation, but it is generally only as the starting-point of chronic hyperæmia that the more acute attack indirectly leads to the production of new formation. The most common cause of hyperæmia is probably catarrh, and catarrh must, therefore, be looked upon as the great predisponent of growths. The various other influences probably only act through establishing a condition of hyperæmia. According to Dr. Tobold, laryngeal growths are most common in middle life, from the thirtieth to the sixtieth year, and that laryngeal polypi are least frequently seen in childhood. On the other hand, Dr. Causit considers that they most frequently occur in early infancy; he also believes that the disease is very often congenital.

The Uterine Sound.—In regard to the history and manner of using the uterine sound, A. Courty, Clinical Prof. School of Medicine of Montpellier, France, in his work on "Diseases of the Uterus and its Appendices," observes that, It is probable that the idea of introducing a sound into the cavity of the uterus to measure its depth and to explore its surface is not new. During the last century Levret sounded the uterus with a whalebone stylet. In 1828 Lair introduced into the cavity of the cervix Larry's grooved probe or sound, the extremity of which he curved gently like a female catheter, and he even recommended that the speculum should be withdrawn about a third, and that it should be lowered as much as possible to facilitate the penetration of this sound from the cavity of the neck into that of the body of the uterus.

Supra-Condyloid Amputation of the Thigh.—In *Medico-Chirurgical Transactions*, London, Vol. LIII., William Stokes, Jr., M.D., Surg. to Richmond Surgical Hospital (paper on Supra-Condyloid Amputation of Thigh), describes his modification of Gritti's mode of amputation at the knee as follows: *First.* That the femoral section is made in all cases at least half an inch above the antero-superior edge of the condyloid cartilage. *Second.* In all cases the cartilaginous surface of the patella is removed. *Third.* The flap is oval, not rectangular. *Fourth.* There is a posterior flap fully one-third of the length of the anterior flap.

Plugging the Rectum.—William Allingham, F.R.C.S., Surgeon to St. Mark's Hospital for Fistula, London (in his work on Fistula, Hemorrhoids, etc.), recommends the following procedure, if secondary bleeding occurs after an operation for piles. When called to a case of hemorrhage, always arm yourself with a full-sized, bell-shaped sponge, and plenty of cotton wadding. Take also some persulphate of iron or powdered alum. Thread a strong silk ligature through near the apex of your cone-shaped sponge, and bring it back again, so that the apex of the sponge is held in a loop of the thread. Then wet the sponge, squeeze it dry, and powder it well, filling up the lacunæ with the iron or alum. Pass the forefinger of the left hand into the bowel, and, upon that as a guide, push up the sponge,

apex first by means of a metal rod, bougie, penholder, or a rounded piece of wood, if nothing better is at hand. The sponge should be carried up the bowel at least five inches, the double thread hanging outside the anus. When this is so placed, fill up the whole of the rectum below the sponge thoroughly and carefully with cotton-wool well powdered with the alum or iron. When the bowel is completely stuffed, take hold of the silk ligature attached to the sponge, and while with one hand you pull *down* the sponge, with the other hand push *up* the wool. This joint action will spread out the bell-shaped sponge, like opening an umbrella, and bring the wool compactly together. The plug should remain in at least a week, and it may be retained a fortnight or more.

Action of Light in Skin-diseases.—Dr. S. H. Potter, Hamilton, Ohio (*Chicago Medical Times*), says that it is a matter of extreme regret that in the treatment of eruptive diseases—as measles, scarlatina, erysipelas, urticaria, small-pox, and many others—greater stress has not been laid upon the importance of the exclusion of light. If daylight be excluded from the room, in the early stage of the disease, and a candle or a mild light be substituted, small-pox may be arrested at the papular or vesicular stage, and never become purulent at all. In acute cutaneous erysipelas the influence of light upon the skin, in its exalted sensitive condition, may cause it to spread to an almost unlimited extent. In most acute forms of inflammatory affections, and those from wounds of the skin, with exalted heat and dryness of surface, light should be excluded from the patient as sedulously and for the same reason as alcohol in any form, or any other direct and well-known powerful stimulant.

On the other hand, light, when needed as a stimulant and tonic, is one of the most potent agents—as in cases of debility or anæmia, any enervated condition when there is paleness, coldness, sluggish circulation, and when the skin has lost its proper elasticity, and needs stimulating and toning.

Gonorrhœa Originated from Other than a Specific Cause.—Dr. J. C. Whitehill (*Medical Archives*) reviews the opinions of Drs. Berkely, Fordyce Barker, Bumstead, Ricord, Johnson, Acton, Diday, and others, who hold that this disease may originate from other than a specific cause. On the other hand Dr. Milton says, that while simple purulent vulvitis and vaginitis would seem at first sight a very likely cause, he has not met with a single instance of the disease originating from these affections. The latter author believes that the matter by which gonorrhœa is communicated is endowed with qualities as truly specific as the lymph of the cow-pox vesicle, and that the supply of the infecting material is kept up in the same way—namely, by propagation from individual to individual.

Dr. Whitehill has met with a number of cases, so strikingly confirmatory of the opinion that the affection does originate from other causes than a specific contagion that he cannot question the fact. At least that certain non-specific vaginal and uterine discharges *may* and *do* give rise to a purulent urethritis in the male, differing in no appreciable manner, in symptoms, sequence, or therapeutic indications, of known specific origin, and amenable to the same treatment.

Cancer in Males and Females.—Prof. John Le Conte, M.D., of the University of California (*The Western Lancet*), has an important paper on "Vital Statistics; Illustrated by the Laws of Mortality from Cancer," in which he has compiled many facts concerning the relative frequency and increase of cancer in the two sexes. In both England and France the annual mortality from cancer among females exceeds that among males nearly in the proportion of three to one.

In relation to organs affected M. Tauchou's researches show that the uterus is most liable to cancer, constituting about 32.8 per cent. of the total deaths from the disease. The stomach comes next, 25.2 per cent.; then the mamma, 21.7 per cent.; and then the liver, 6.3 per cent. Among females, the mortality from cancer uteri is about 43 per cent. of the total deaths from the disease in that sex, and the mamma 28.4 per cent.

Hypodermic Injections of Morphia.—Dr. Robert M. Otis, of Cambridge, Mass. (*Boston Med. and Surg. Journal*), mentions the case of a lady, aged 27, with hip-joint disease, who from June 14, 1870, to December 31, 1871, 18½ months, had injected into her body six ounces of sulphate of morphia. If eight grains is taken for the average daily injection, this patient has used, subcutaneously, in the last four years, at least twenty-four ounces of sulphate of morphia. At this time, after consuming such an enormous quantity, she is in better health than at any other time for the last four years. She has no desire for opium, would gladly leave off the use of hypodermic injection, and has made repeated attempts to do so, but without success. She shows none of the injurious effects of opium, as laid down by writers.

On Spurious, Feigned, and Concealed Pregnancy.—Dr. Thomas More Madden, of Dublin, sends us a pamphlet on the above subject, giving the histories of several interesting cases illustrating the above conditions. Under the first division, or pseudocysis, the doctor remarks the frequency with which we find most of the ordinary symptoms of true pregnancy counterfeited, and draws attention to the fact that the abdomen usually increases in size more rapidly than in true pregnancy. This enlargement may generally be traced to dropsical effusion into the peritoneal cavity, to the tendency to a deposit of fat in the omentum about the period of the change of life, or to accumulation in the intestines of flatus or fæcal matter. In almost every case he has noticed the patient has asserted that she could distinctly feel the movementsof the fœtus; and such symptoms as "longings," alteration in tastes, irritability of temper, neuralgic pains, enlargement of breasts, turgescence and coloration of nipples, and even secretion of a lactescent fluid are not uncommonly present. However closely the symptoms of pregnancy may be simulated before the fifth month, the positive signs cannot be counterfeited after this date. Physical examination, he thinks, affords but doubtful help in the diagnosis, since the absence of sounds of placental scuffle and fœtal heart is no evidence that the womb does not contain a fœtus. He is disposed to place more reliance on a manual examination of the surface of the abdomen, the muscles being relaxed; and digital exploration per vaginam.

He gives two cases in which the pregnant condition was obscured by disease; and under the head of "Concealed Pregnancy" calls attention to the necessity of ascertaining before any operation upon the uterus is undertaken, especially before a resort is had to the uterine sound, that the organ is not gravid; it having come to his notice that women, knowing or suspecting themselves to be pregnant, have secreted the fact from the physician with the intention of throwing upon him the onus of having produced an abortion by the use of this instrument.

Lacto-Phosphate of Lime in Fevers.—*The Practitioner* for February contains an interesting paper by Dr. Blacke, of Paris, on "The Use of Lacto-Phosphate of Lime in Adynamic Fevers and in Convalescence." Believing that the phosphate played an essential part in the nutrition, not only of the bony structures but of the tissues generally, he tried the experiment of keeping a pigeon upon food almost wholly deprived of phosphates. The pigeon lost its liveliness, its appetite failed, and its weight notably decreased; the muscular and fibrous tissues seeming to suffer as well as the bones. On adding phosphate of lime to the food, the bird rapidly regained its normal condition.

Dr. Blacke explains the want of success that often attends the use of phosphate of lime, even in cases in which it seems most directly indicated, such as rachitis, osteomalacia, etc., by the fact that it is usually given in a pulverulent form, in which form lactic acid is the natural solvent. Now the gastric juice contains only $\frac{1}{1000}$ of lactic acid, a quantity too small to dissolve an appreciable amount of the phosphate. The remainder passes into the intestines, undissolved, where it creates irritation, and is therefore worse than useless. He claims that when given in combination with lactic acid, the results will correspond much more closely with what we should expect theoretically.

He has found the lacto-phosphate of lime a very valuable analeptic in adynamia occurring in pneumonia and in low forms of fever. During the late siege of Paris he employed it in a large number of cases of typhoid. He found that in from 36 to 48 hours the pulse became less frequent and the temperature decreased, while the countenance lost the expression of stupor so striking in adynamic forms of the disease, and the patient entered upon a rapid convalescence.

He states unreservedly that excitement of the appetite and facility of digestion constantly and quickly results from the ingestion of this drug.

Calabar Bean in Epilepsy.—The same number of *The Practitioner* contains an article by Dr. S. W. D. Williams, Superintendent of the Sussex Insane Asylum, on the use of the Calabar bean in epilepsy. He selected twelve cases for experiment, giving the bean in a dose of one grain twice a day. On comparing the number of fits occurring during six months of this treatment with the number occurring during the previous six months, he found that in six of the twelve cases there was an average decrease of about 17 per cent., while in the other six there was an average increase of about 7 per cent. On the theory that the drug diminished reflex action, he examined carefully the cases which were benefited, with the hope of finding some eccentric irritation which might induce the attacks, but he failed to find anything satisfactory. He is therefore unable to tell, in advance, what cases are likely to be benefited by the bean. The peculiar pallor which sometimes precedes the attacks occurred as often in those cases which were not benefited as in those that were.

Increased action of the skin was observed, even when small doses were given. Catharsis or nausea, was not observed, even when eight grains were given daily.

Phosphate of Lime as a Therapeutical Agent.—Dr. Artus, of Jena, suggests the following method of preparing this substance for administration in cases of rachitis, mollities ossium, etc.

Bones should be calcined, pulverized, and treated with hydrochloric acid, the fluid filtered, and the filtrate, which chiefly contains the phosphatic salts, treated with carbonate of soda till no precipitate falls, the precipitate being collected on silk and washed to remove the common salt.

Five or six times its weight of milk is now poured over it and it is allowed to stand for several days at a temperature of about 70° Fah. On the third day some finely-powdered milk sugar may be added; as a result of this a corresponding amount of lactic acid is formed, which aids in dissolving the phosphate of lime. After six or eight days it is diluted with water, filtered, and again reduced to a syrupy consistence by evaporation, in which form it may be administered.—*Algem. Wiener Med.-Zeit.*

Litharge in the Treatment of Burns.—Dr. Audant contributes to the *Bulletin Gén. de Thérapeutique* some observations on the use of this substance in the treatment of burns; such use having for many years been customary in the country about Dax, where it is known as the *remède de Paban*. He has employed it on several occasions, and always with success, even when the burns were extensive and severe. The litharge should be in fine powder, the sweet oil, with which it is to be mixed, recent and free from rancidity, and the mixture of sufficient consistence to permit it being applied with a brush or feather.—*The Practitioner.*

Use of Phosphorus in Certain Diseases of the Skin.—Dr. Eames reports a number of cases, in the *Dublin Journal of Medical Science*, in which he has found phosphorus serviceable, the most common form in which it was administered being a solution of the metalloid in oil. Ten grains of pure phosphorus were dissolved in an ounce of olive oil, the dose of this solution being from five to ten minims three times a day, after meals. It may also be dissolved in ether or given in the form of pills; but the objections which are sometimes made to the disagreeable taste of these preparations may be entirely obviated by having the oily solution enclosed in capsules. Dr. Eames has found that the medicine thus given, in doses of one-tenth, one-twentieth, or one-thirtieth of a grain, is much less liable to produce dyspeptic derangements, and that disagreeable eructations are less frequent. The cases he reports include instances of severe acne indurata; lupus, scrofula-derma, psoriasis, pemphigus, etc. In many of the cases arsenic and a variety of other remedies had been tried in vain. The Doctor observed that phosphorus produces a coated tongue, not unlike the silvery tongue which follows the prolonged use of arsenic. Loss of appetite, mental depression, and bodily weakness are induced much earlier in some cases than in others, and are to be watched for whenever the drug is given. On the earliest appearance of dyspeptic symptoms Dr. Eames discontinues the administration of the remedy and gives, instead, some one of the mineral acids. The doctor has not ascertained that any aphrodisiac effect is produced, though he has frequently inquired after it. Slight diaphoresis commonly attends the use of phosphorus. Diarrhœa was observed in none of the cases. The amount of urine was sometimes slightly increased, but examination failed to detect any variation from the healthy standard.

Subcutaneous Injection of Ergotin in Varix.—Having observed the records of good results following the subcutaneous injection of ergotin in cases of aneurism, in the hands of von Langenbeck, Schneider, and Dutoit, Dr. Paul Vogt, of Greifswald, was led to try the remedy in varix of the lower limb. The first patient on whom experiment was made was a man aged 60, who had for several years suffered from extensive varices of the leg. A solution of two *grammes* of ergotin was

made in 7.5 *grammes* each of spirits of wine and glycerine; and a quantity containing 12 *centigrammes* of ergotin was injected at the proximal end of a varix, more than two inches long and as thick as a little finger, lying over the tibia. The injection was repeated every second day. In eight days the varix could not be seen; and in six weeks no trace was left. During the treatment the patient went about as usual. Another varix, the size of a hazel-nut, lying on the outer side of the calf, was treated in a similar manner, with the same result. At the point where the injection was made there was some hard, circumscribed infiltration which gradually disappeared. Several other patients in the Greifswald Hospital, some of them with very large varices, have been similarly treated, with a surprisingly good effect. Dr. Vogt believes that the ergotin causes contraction of the muscular coat of the arteries, so that the flow of blood into the dilated vessels is hindered; that it also produces contraction in the veins; and that the local infiltration following the injection may have some effect by the compression which it exercises.—*Berliner Klin. Wochenschrift.*

Fever and the Sewers.—The *Medical Press and Circular* of April 10th, contains the following:—After all that was said at the time of the Prince of Wales's illness, the public will be glad to learn, on authority, that the men employed in the sewers are not only not carried off by fever, but appear singularly free from the ravages of that disease. At the investigation of Dr. Brewer, the Metropolitan Board of Works ordered a return on the subject, which has just been issued, and is quite conclusive.

Out of 5 inspectors employed, from twenty-three to forty-eight years, there has never been a case of fever. Out of 64 men employed in cleansing and flushing the northern sewers for periods varying up to thirty-four years, only 2 have had fever, and their cases were typhus.

Out of 47 men engaged in the sewer work in the southern sewers for periods varying from one to twenty-four years, there have only been 2 cases of fever, and these again typhus, and in one of these cases, it is shown that the disease was contracted from the man's family. There are 36 penstock and flap-keepers who have been employed from one to fifty years. Of all these, only 1 has had any fever. He has been sixteen years at work, and had typhoid in 1862. There are some curious notes about these men. One of them has been at this work fifty years, and has not had one day's illness during the time. One lived twenty-five years in the sluice-house over the King's Scholars' Pond Sewer, but never had any fever. Another lived for fourteen years in Penstock house, over Outfall Sewer at Old Ford. Another lived thirty-two years in Great St. John's sluice-house. Another lived for thirty-five years in a house over Duffield sluice and enjoyed good health. Out of 54 men employed at the pumping stations there, has been only one case of fever (typhoid).

At Crossness, out of 54 men engaged during the last six years, there has not been one case of typhus or typhoid. There have been 8 cases of ague, but these are of course due to the low marshy district, and they seem to have recovered rapidly. Out of 7 men employed in cleansing ventilators, oiling side entrances, gauges, etc., no case of fever has occurred though one man has been at work twenty-three years. Of 10 surveyors and chainmen in the engineer's office, not one has ever had typhoid fever, although they have been almost daily engaged in the sewers for periods of from four to twenty-four years.

These facts are very gratifying, and quite dispose of the allegation that the men in the sewers are decimated by fever. The statistics show, in fact, that fever is less prevalent amongst these men than the rest of the town population.

Gastro-hysterotomy.—This operation has been very rarely performed in the United States, so much so that in many of the thirty-seven commonwealths not one can be found. New York City, with its transfluvial neighbors, and Philadelphia, collectively containing more than 2,000,000 of inhabitants, present but five cases of the operation, three of which belong to Philadelphia. Of these five, two women and one child perished. Perhaps the oldest operation of gastro-hysterotomy in North America was that which was performed in the Island of Jamaica, in 1769, upon herself, by a slave woman, with success. Dr. Robt. P. Harris, of Phila. (*Am. Journ. Obstetrics*), finds that 60 per cent. of the women recovered, or 15 out of 25. The *whole mortality* among the children, owing to the gravity of the delayed cases, amounted to 56 per cent., or 14 out of 25.

Iodine in Post-partum Hemorrhage.—Dr. Booth, of North Carolina, records a case of a woman in her tenth labor, who had experienced several dangerous attacks of flooding after her labors. In this, after six hours the child was born, and the after-birth was delivered naturally, and all went on well for three-quarters of an hour, at the expiration of which time the uterine tumor became large, soft, and flaccid, with other symptoms of hemorrhage. Friction was tried, the hand was introduced, the abdomen being pushed with the other, but without effect. Happening to have some solution of iodine and iodide of potash in glycerine, double the strength of the officinal tincture of iodine, Dr. Booth injected this into the uterus, diluted with about twelve times its bulk of water. Immediately the flooding ceased, and the patient did well afterwards. Dr. Booth thinks that while astringent agents act in great measure by forming a coagulum, iodine acts directly on the mouths of the blood-vessels themselves.—*Virginia Clinical Record.*

Kraus and Hermann, of Vienna, on Syphilis.—Dr. C. R. Drysdale, writing to the *Medical Press and Circular* of April 3, says:

The Vienna school is at present much occupied in the discussion of the nature and treatment of syphilis. Dr. Kraus, editor of the *Wien. Allgem. Medic.-Zeitung*, in the issue of March 5th, observes that he believes that a newly-born syphilitic child may infect its own mother, and that he thinks all such infants should be brought up by hand, and not given to any nurse. Great cleanliness is requisite in treating these children. Local treatment of the syphilides about the mouth, arms, etc., consists in touching them with a caustic of some kind. Calomel is, in Dr. Kraus' opinion, undoubtedly the best remedy for syphilitic children. Corrosive sublimate and iodine are bad. Only in very uncommon cases, when diarrhœa or vomiting exists, is the use of mercurial ointment of service, 0.30 gramme is then to be rubbed in in various parts. Calomel is to be given in doses of one-fifth of a grain four or five times a day for a fortnight, and then lactate of iron in small doses.

Dr. Hermann, of the Weiden Hospital, in the same journal of the 27th of February, says: "I could fill a volume with all the ways and means taken by opponents of my experiments." These gentlemen used every means in their power to put a stop to his non-mercurial treatment of syphilis in the Weiden Hospital. That such attempts have not succeeded, he attributes

to the fact that in the syphilitic section of the hospital, the time taken for the cure of the disease is one-third shorter than in the other hospitals of Vienna, and that this division of the hospital has given a lesson to all who care for evidence against mercury, by its 25,000 cases which have been successfully treated there.

Treatment of Tetanus Among the Chinese.—This mode of treating tetanus has been seen by English physicians in China and India to be successful. The patient smokes in a pipe a mixture of from twenty to twenty-five *centigrammes* of crude opium and tea, or rose-leaves, which are worked up with a small quantity of molasses. When smoking he must inspire as deeply as possible, and continue this operation until a narcotic influence is noticed. This, then, continues, as a rule, three to four hours. The smoking is repeated as soon as the tetanic symptoms reappear. In the mean time as much nourishment as possible is given. In using opium thus, it must be remembered that its narcotic effect is somewhat neutralized by tobacco.—*Gazette Medicale Ital. Lomb.*

Colloid Degeneration of the Brain in General Paralysis.—(*Archiv der deutschen Ges. für Psychiatrie. The Journal of Psycholog. Med.*, April, 1872.) A summary of the treatise by Dr. Magnan, of Paris, is taken from the latter journal:

1. The disease, generally described as diffuse interstitial encephalitis, may be attended by the action, at circumscribed points, of a very powerful irritation, which results in an active proliferation of the elements of the neuroglia and of the vessel walls.

2. These proliferated cells become infiltrated by masses of colloid matter, instead of being transformed into connective tissue, as is usually the case. The nuclei are first attacked by this rapidly-increasing morbid product, then the cells, and last the tissue proper itself.

3. The colloid degeneration has certain peculiarities, by which we are able to distinguish between it and other degenerations. The colloid mass appears as a hyaline substance; is, however, only slightly transparent, showing at certain points a feeble bluish reflection. In the smaller deposits it appears in the form of little regular heaps which present more or less the appearance of healthy cells, or of masses of broken-down cells. When the colloid matter is present in larger quantity, and when several of the little groups have coalesced, it appears as an irregular mass marked by deep furrows.

The colloid matter is insoluble in alcohol, ether, and chloroform; in strong acetic acid it becomes pale, and gradually dissolves. Ammoniated tincture of carmine with potassa tinges it very rapidly. Tincture of iodine has no effect upon it, either with or without sulphuric acid. No change occurs upon the addition of hydrochloric acid. The mass is softened, but does not dissolve, in weak, watery solutions of potassa and soda. Warm fluids dissolve the mass, their action being promoted by the addition of potassa and soda.

It is, consequently, not fatty, because it is colored by carmine, and is insoluble in ether and chloroform. It is not inorganic, because hydrochloric acid has no effect upon it. It differs from corpora amylacea, in that it is unaffected by tincture of iodine, and from amyloid degeneration, in that it dissolves in strong acetic acid; cold solutions of potassa and soda have no effect upon it, and there is no reaction with iodine and sulphuric acid, peculiarities which characterize amyloid degeneration. (*Vide Etudes sur la Dégénérescence amyloïde, par* Hayem.)

4. From its evolution and course, colloid degeneration might be regarded as a product of diffuse interstitial encephalitis; but its rarity, and its circumscribed localization upon the one hand, together with its individual characteristics when it has attained to its highest point of development upon the other, show it to be an altogether accessory lesion of general paralysis.

Treatment of Diarrhœa in Infants.—Dr. K. Weiser objects to the usual modes of treating diarrhœa in children by means of astringent mixtures, warm poultices on the belly, and injections of mucilaginous fluids; he prefers, instead, to envelop the child in a moist cloth, with a warm covering around this. When free perspiration has been induced, the skin is to be rubbed with a moist cloth. He gives a little coffee and milk with a small quantity of carbonate of soda several times daily.

If the temperature of the body has been reduced by these means, cold cloths, changed every five or ten minutes, for some time, are applied, and he prescribes five drops of a solution of oxidulated (?) sulphate of iron four times a day.—*Wiener Med. Wochenschrift.*

Liquefying Dead Bodies.—A certain M. Donac has recently laid before the French Academy of Sciences a project for liquefying dead bodies and transforming them into a syrup without color or smell. According to his calculation a moderate-sized man could be got into six bottles. The size of each bottle is not stated, but the *Paris Journal* appears charmed with the idea and exclaims, "What an opening for the exercise of filial piety!"

Attachment of Fœtal Remains.—Dr. W. L. Huyette, of Rolla, Mo. (*St. Louis Med. and Surg. Journal*), recently had a case of midwifery, in which the child suddenly ceased to advance on account of a fluctuating tumor at the lumbo-sacral region. The contents was discharged, after which a perfect child in other respects was delivered. At the end of a week the mass was extirpated. Its contents were as follows: Attached to the body of the child, with a perfect vascular and nervous connection, a foot, leg, and thigh was discovered. The foot had three toes with nails perfect, and on the thigh was a covering of down. The whole member measured about three and a half inches. Upon the inner surface of the tumor a body resembling a placenta, and the rudiment of a hand; also hair one and a half inches in length, covering a space of one inch by one and a half inches. In addition to these, three distinct sacs or tumors, which when opened discharged a liquid resembling that emitted from the tumor proper, identical with the liq. amnii.

Management of Croup.—In a late discussion on Dr. E. Boerck's paper on Croup, by the members of the St. Louis Medical Society (*St. Louis Med. and Surg. Journal*), Dr. Edgar differed with the author as to croup being a constitutional or blood disease. Dr. Kennard thought the nebulizer liable to abuse in the hands of parties disposed to humbug their patients, while it did good in some cases; that a large part of the liquid must be retained in the mouth and fauces, hence failing to reach the seat of the disease. He thought calomel, in two or three grain doses, repeated as indicated, serviceable. He had used cold compresses to the throat with apparent advantage in some cases occurring in vigorous children.

Dr. Johnston concurred generally with Dr. Kennard as to the value of old-time treatment; and thought as many cases of membranous croup were saved thirty years ago as now.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE LATE NEW YORK HOSPITAL.

The report of the state of the New York Hospital recently made to the Legislature is not only suggestive of many changes that might be made in hospital management in general, but of many reforms which the Society of the said hospital might initiate. We were among the number who objected to the removal and the destruction of the old City Hospital, and believed that the act was, from many points of view, unwise and unproductive of much of the good which was claimed by the advocates of the inconoclastic proceeding. Although free to admit our prejudice for such an old landmark, and objecting to its demolition as such, we were ready to endure the verdict of the governors, provided the objects of the charity were furthered thereby. We foresaw, however, a poor opportunity for congratulating ourselves on any changes for the better which would of themselves warrant so radical a course by the hospital authorities. The object did not appear to be to improve hospital construction, or hospital facilities, so much as to do away with the institution entirely. The Board of Governors did not prepare themselves for anything save the disposal of the buildings and the grounds to the best pecuniary advantage. As evidences of the latter intention, we notice that at the end of two years after the closure of the institution nothing whatever has been done towards perfecting a plan which shall enable the council to carry out the spirit and intention of their charter.

It is true that the report before us, although exceedingly short, is full of excuses for the course taken by the hospital authorities, and full of promises for the future; but in neither of these elements is it a praisworthy or a remarkable document. It would be strange indeed if something could not be said bearing upon the expediency of a renewal of the hospital. To such, however, as are acquainted with the necessities for hospital treatment for accident cases, occurring, as they may, in the lower part of our city, more populous as to area than any other portion of the island, none of the reasons for a removal apply with any particular force.

We are informed that the "policy of the Society," as expressed by resolutions of the Board of Governors, is to reëstablish the General Hospital on its lands at Bloomingdale, when the asylum for the insane now occupying these grounds shall have been transferred to White Plains, where an appropriate site for that purpose was purchased some years ago. It is quite apparent that the intention of the Board is and has been to sacrifice the true interests of the hospital proper to those of the Insane Asylum. No other explanation can be offered for the wild scheme of establishing a charity so far beyond the city limits as the present site of the Bloomingdale Asylum. The plan is evidently a pet one with the governors, and has admitted of no compromise as to a more eligible situation. Many propositions, "having reference to an earlier resumption of general hospital treatment than the present policy of this Society would permit, have been carefully (?) considered, but they have been severally rejected as being inconsistent with those sound (!) principles of action which had constrained the Board of Governors to adopt the course above indicated." What the sound principles of action may indicate save an avowed determination to move the asylum to a better place, and compel the hospital proper to take what it can get, we are at a loss to determine. In any event the hopes for the hospital are to be deferred until such time as the plans for suitable Asylum buildings on the White Plains land shall be perfected, and the necessary amount of money raised for "this important object." Until all this is accomplished, no proposition for an earlier resumption of general hospital treatment can be entertained. If we are mistaken in such an intention, then we have failed to appreciate the force of the following, which we quote from the report: "Any plan for the resumption of direct hospital work by this Society, which involves an expenditure for hospital site and buildings (!), that would necessarily deprive it for a long period of this application of its annual income from the ground rents of the old Hospital grounds, is fatally defective (!)." So much, then, for the policy of the Society in regard to a hospital site.

No one directly or indirectly interested in the proper care of the Insane can object to the prosperity of the Bloomingdale Asylum. It has, during the present administration especially, earned for itself an enviable reputation, and eminently deserves to be encouraged and supported; but we see no good reason why, to accomplish such an end, the claims of its parent should be ignored and the best interests of the hospital sacrificed.

There are several reasons mentioned why it was decided to break up the hospital; but no one can escape the conviction that one of the principal ones was the

opportunity for increasing the usefulness of the Insane Asylum by directing the energies of the Society towards the erection of the proposed model institution for lunatics in White Plains.

It would have been much more to the credit of the managers of the hospital if they had claimed that the main reason for removing the hospital was a sanitary one. Every sanitarian knows that hospitals, when in existence as such, "become permeated with organic impurities, and that it is a real sanitary advantage that they should be pulled down and entirely rebuilt on a fresh site periodically." The longer a hospital exists, the greater is its rate of mortality after operations, a fact which experience has abundantly proved in the older hospitals of London, Paris, and other large cities. Although by great precautions the New York Hospital was kept in a good sanitary condition, it was liable to outbreaks of pyæmia, erysipelas, hospital gangrene and typhoid fever. This was to be expected and was to be guarded against in every possible way, even to the destruction of the building itself. But that this was not the all-powerful reason for its demolition is shown by the determination of rebuilding it at some future time, after the asylum is cared for.

We believe in transitory hospitals, and have on more than one occasion entered our protest against large and expensive charities. These establishments as now built involve a useless outlay of money, without its equivalent of roportionate good to the sick. The benefits of hospitals constructed upon the pavilion plan have been unmistakably proven during the last war. In a sanitary point of view no objection can be urged against their universal adoption. The Society of the New York Hospital has now an opportunity of benefiting by their experience, by erecting an inexpensive building upon leased ground, to be torn down when necessary, and removed to some other situation. The proposed house for the reception and temporary care of persons suffering from sudden injuries or acute maladies could be built on such a principle in some accesible portion of the City. This would require a comparatively small outlay, and could be so economically managed as to afford relief for the many who might be unfortunate enough to need it. If the experiment were successful, the plan could be amplified and the resuscitated New York Hospital be made the exponent of the advanced views of sanitarians in every portion of the civilized globe.

Mr. James W. Beekman, one of the governors, in his admirable centennial address before the Society, delivered July 24, 1872, has collected many interesting facts bearing upon this question, which are full of suggestion for the future of the hospital.

MEDICAL AND SURGICAL HISTORY OF THE WAR.

The first part of the Medical and Surgical History of the War has been sent to Congress with a request for permission to complete the work. It contains the completed medical statistics (726 pages) of sickness, mortality, and discharge from service for disability, during the war, with three hundred and sixty-five pages of appended documents, consisting of extracts from the reports of medical directors of armies in the field and other medical reports of historical value and interest; a chronological table of all battles and engagements of the war of which any report or record has been made, and five hundred pages of surgical matter, comprising all wounds and injuries of the head, neck, and chest, with a full discussion of each class. The material and data remaining on hand, much of which is already classified and tabulated for the completion of this work, will, with the utmost possible condensation, form two more parts similar to this, each containing an equal amount of medical and surgical matter. The succeeding medical portion will describe, discuss, and illustrate by engravings and chromos, the symptoms, pathology, and treatment of those diseases which were the chief cause of the sickness and mortality recorded in the first portion, such as camp fever, camp diarrhœa and dysentery, pneumonia, camp measles, small-pox, and the like, with histories of cases, records of autopsies, and special reports. The surgical portion will comprise wounds and injuries of the abdomen and extremities, surgical operations and their results. The number of major amputations was thirty thousand; excisions of large joints, five thousand; ligations of large arteries, eight hundred. With this is a vast amount of information upon such surgical diseases as pyæmia, osteo-myelitis, hospital gangrene, tetanus, etc., with the illustrations which the importance of these subjects demands. A report upon hospital construction and administration, modes of transport of the sick and wounded, and the distribution of medical supplies during the war, will complete the work.

We sincerely hope that the request to complete the work will be granted by Congress during its present session, that there may be as little delay as possible in presenting to the medical profession of this country and the world a record that cannot fail to prove unique, exhaustive, and invaluable. No pains have thus far been spared by Surgeon-General J. K. Barnes in causing the necessary materials to be collected, and rendering the report worthy of its name. The appropriation sought is but a trifle compared with the incalculable benefit which the publication of the work can confer on science, and on humanity at large.

STREET CLEANING.

It is a cause for congratulation that the responsibility for cleaning our streets has been, by a recent Act of the Legislature, transferred to the Police Commissioners. With all the facilities such a commission may have in performing the duties of their new office, it is to be hoped the accumulated filth of the past six months may rapidly disappear, and that our metropolis

may be saved the possibility of being an easy prey to the usual epidemics of hot weather.

THE MEDICAL BILL.

The Medical Bill, of which we have spoken in previous numbers, has passed both Houses of the State Legislature, and up to the time of our going to press there appears to be a strong probability of its receiving the signature of His Excellency the Governor. As we have remarked before, we are willing to see it become a law, and have the experiment of its practical working fairly tried. If it prove to be a success we shall have taken a step in the direction of more radical reforms in the future.

QUACKERY AND THE RELIGIOUS PRESS.

At the recent General Methodist Conference a proposition was made to prohibit the publication of quack advertisements in the *Church Journal*. The matter, we are pleased to learn, was referred to an appropriate committee. We would suggest that not only the objectionable advertisements be ordered a refusal, but that every clergyman giving his individual endorsement to patent nostrums be deprived of his ecclesiastical rights.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 22, 1872.

Dr. Ellsworth Eliot, Vice-President, in the Chair.

NEW MEMBERS.

The following gentlemen, recommended by the Comitia Minora, were elected to membership: Drs. Thomas K. Cruse, Oscar A. Ruffel, Lewis Tici. Herman G. Klotz, George C. Stubling, Ludwig T. G. Simpect, Allan M. Schaffer, and A. Nelson Beach.

CARBOLIC ACID AS AN ANÆSTHETIC.

Dr. Andrew H. Smith, from the Committee on Intelligence, read a Report on Therapeutics, from which we extract the following:

Dr. Bill, of the U. S. Army, and Dr. Squibb, have recently called attention to the action of carbolic acid as a local anæsthetic. As their papers have had a very general circulation, I will not give a synopsis of them, but merely state the results of some experiments that I have made upon my own person, which agree entirely with their experience.

In the first experiment I painted a spot on the forearm, about an inch in diameter, with carbolic acid of about the strength of 85 per cent. For about a minute there was a slight burning sensation, after which the integument became entirely insensible, the cuticle being whitened and shriveled, and the spot slightly elevated. I then, with a scalpel, made an incision about half an inch in length through the whole thickness of the integument. This was done without even feeling the contact of the knife. The capillary circulation seemed not to be materially interfered with, as the blood flowed as freely as it would from a similar wound under ordinary circumstances. The reparative process was also not impaired, adhesion taking place immediately. Three hours after the application of the acid a needle could be thrust freely into the skin without causing pain.

In the second experiment carbolic acid was applied as before, and ten minutes after a fly-blister was placed upon the spot. The blister remained 8½ hours without causing any pain, and without producing vesication.

In two instances I have applied the acid previous to incising a whitlow. The operation was almost painless, but as the whitlow was in each case of the superficial variety, the test was not entirely conclusive.

Inhaled in the form of spray I have found the acid very useful in allaying irritation of the bronchial mucous membrane; coughs which have resisted all ordinary treatment have been immediately relieved and in the course of two or three days entirely removed.

I would suggest the use of a strong solution of carbolic acid as a revulsive in cases in which a continuous impression is desired. While causing but little suffering, it produces an intense hyperæmia of the skin, which persists for eight or ten days, and is followed by desquamation of the cuticle.

METEOROLOGY OF NINE WEEKS.

Dr. D. H. Goodwillie, its Chairman, read the Report of the Committee on Meteorology. We give a transcript of the last two reports of this Committee.

From February 4th to March 9th, 1872.

Barometer: mean, 29.797 inches; maximum, Feb. 8th, 30.398 inches; minimum, Feb. 13th, 29.514 inches.

Thermometer: mean, 29.50°F., maximum, Feb. 24th 52°, minimum, March 5th, 4°.

Rain on Feb. 4th, 6th, 11th, 13th, and 25th; snow on March 2d and 9th.

From March 10th to April 6th, inclusive.

Barometer: mean, 29.901 inches; maximum, March 16th, 30.144 inches; minimum, March 31st, 29.255 inches.

Thermometer: mean, 36.75°; maximum, March 29th, and April 6th, 59°; minimum, March 21st, 16°; Range for the four weeks: 39.8°.

Rain on March 10th, 15th, and 31st, snow on March 12th, 17th, 23d, and 26th. Amount of water 3.92 inches. Prevailing wind was from the NW.

DISEASES OF THREE MONTHS.

Dr. Charles P. Russel, Chairman of the Committee on Diseases, read its Report:

The Committee on Diseases have the honor to report as follows:

During the past quarter, comprising January, February, and March, the following *contagious diseases* were reported to the Bureau of Sanitary Inspection of the Health Department: Typhus Fever, 32; Typhoid Fever, 97; Scarlatina, 1,043; Measles, 241; Diphtheria, 181; Small Pox, 1,043.

The *mortality* of the three months was excessive, amounting to 7,406 deaths—a weekly average of 570; the weekly average of the corresponding period of 1871 having been 510, and the weekly average of the whole year having been only 522. During the three weeks which have elapsed since the end of the quarter, there have been registered 705, 691, and 677 deaths respectively. Should a proportionate mortality pre-

vail for the remainder of the year, its aggregate, even in the absence of any serious epidemic, will exceed by at least 7,000 that of any former year, and by 10,000 the annual average of the previous ten years.

The principal *zymotic diseases* of the past quarter were as follows: Small-pox occasioned 320 deaths—a weekly average of 25; its largest quarterly mortality in this city during the present century. Its registered deaths for the past three weeks have been 33, 35, and 40 respectively. It would appear, therefore, to be on the increase. 106 deaths were referred to Measles, 301 to Scarlatina, 93 to Diphtheria, 201 to Membranous Croup, 247 to Whooping Cough—an unusually large number, and 227 to Diarrhœal Affections. Typhus and Typhoid Fevers were not very prevalent, the former having caused 37 and the latter 59 deaths. Remittent Fever produced 43 deaths, Intermittent 10, and Typho-Malarial 5. 69 deaths were ascribed to Cerebro-Spinal Meningitis, which began to manifest a decided epidemic tendency about the beginning of February, and has since, until very recently, been steadily progressing in fatality. Its registered deaths for each of the three weeks ending last Saturday were 31, 52, and 27 respectively. Puerperal Diseases were more than usually fatal, having occasioned 137 deaths, of which 39 were due to Puerperal Fever attended with Septicæmia or Pyæmia. At the same time Erysipelas prevailed extensively, its deaths for the three months amounting to 64.

The other prominent diseases of the quarter were Phthisis Pulmonalis, which carried off 1,155 persons—a weekly average of 89; Pneumonia, to which 772 deaths were attributed, against 642 in the corresponding period of 1871; and Bronchitis, which caused 326 deaths, against 283 in the first quarter of 1871.

THE LABYRINTH OF THE EAR.

Dr. H. Knapp delivered a very interesting lecture upon *the Labyrinth of the Ear, its Structure, Functions, and Diseases*, with blackboard illustrations.

After a brief explanation of the nature of sound, as produced by the vibration of ponderable bodies; of the distinction between *noises*, produced by irregular vibrations, and *musical tones*, produced by rhythmically recurring ones; and of the three elements of *pitch*, *intensity*, and *quality* (*timbre*), which characterize every tone—the first due to the frequency with which the sound-waves fall upon the ear; the second, to the excursion of the vibrating particles; and the last, to the combination of the higher harmonics, or "over-tones," with the fundamental note, as demonstrated by Helmholtz—the speaker came to the description of the auditory organ as an apparatus adapted to the perception of sound, and to the discrimination of its several characteristics. Modern research had been so active in this field, that the mechanical explanation of audition, only a few years since one of the most difficult and obscure of physiological problems, might now be considered among the clearest and best settled.

Assuming the familiarity of his audience with the anatomy of the external and middle ear, and of the osseous framework of the internal, the Doctor confined himself to a minute account of the membranous labyrinth, referring particularly to the late observations of Waldeyer and Gottstein, some of which he had himself confirmed. As we can mention only a few points of his crowded discourse, we must further assume that our readers know so much of the membranous labyrinth as may be learned from recent anatomical textbooks, such, for example, as the last English edition of Quain.

The mode of connection between the utricle (common sinus) and the saccule, has long been a matter of doubt. Of late, however, what seems to have been an old discovery has been made anew, and it is demonstrated that from either sac there proceeds a slender duct, the two uniting in a single one (after the manner of the cystic and hepatic, in the common choledoch) which passes through the aquæductus vestibuli, to open into the so-called arachnoid cavity. Thus the endolymph is in direct connection with the fluid occupying the space between the arachnoid and the dura mater. Furthermore, the loose areolar tissue surrounding the filaments of the auditory nerve, as they pass through the cribriform plate at the bottom of the meatus internus, permits a tolerably free communication between the perilymph and the subarachnoid fluid. It is not surprising, therefore, that the auditory nerve, expanded on a membrane between the endolymph and the perilymph, should so speedily respond to changes of intracranial pressure.

The terminal filaments of the vestibular nerve, being connected with the otoliths of the sacs and the ampullæ—bodies apparently ill adapted to rhythmical vibration—would seem intended for the perception of noises. [This is what we should expect from finding the vestibule, with its suspended otolith, as the most rudimentary form of the ear, serving probably to warn the animal of approaching danger by the noise attending it. The intensity of the sound is no doubt rudely measured by the degree of commotion into which the otoliths are thrown, though in the higher animals this is more perfectly accomplished by the muscles of the tympanum. Is it not possible that the hair-like processes, extending beyond the ear-sand into the endolymph, may, by vibrating as free rods, also give some perception of pitch, though far less delicate and extended than that furnished by the cochlear apparatus?]

Coming to the more complicated cochlea, it will be remembered that the membrana basilaris, which extends from the edge of the bony lamina spiralis to the cochlear wall, and upon which rests the organ of Corti, is divided into an inner *zona tecta vel arcuata*, covered by the arches formed by the rods of Corti, and an outer *zona pectinata*, characterized by its coarse transverse striæ. Now these striæ are found to be strings embedded in the substance of the membrane, each being attached at its outer extremity to the spiral ligament, and at its inner to the foot of one of the club-shaped ciliated cells which, in a fourfold series, lean upon Corti's rods—the very cells to which have been traced the terminal filaments of the cochlear nerve. As the zona pectinata increases in breadth from base to apex of the cochlea, these strings are of regularly varying length; they appear also to be of differing thickness; and if we suppose, with Todd and Bowman, that the ligamentum spirale is really muscular, it is conceivable that they may vary in tension, being *tuned* by this "cochlear muscle." The strings are doubtless isolated from each other by a non-elastic "cement," which allows each to vibrate without affecting its neighbors.

Consider that there are some three thousand of these strings, each connected with its own ciliated cell, and communicating its slightest tremor to its special nerve-filament, and we have a resonance-apparatus manifestly delicate enough to discriminate all the shades of tone the ear is able to appreciate. In obedience to the familiar law of resonance, a given note will determine a responsive vibration in that particular string of the whole three thousand which is tuned in unison with it, and so send notice of its exact pitch to the brain. A chord will throw into vibration several strings, each sending its separate message to its own brain-cell; and the combination of these independent sensations will

give the sense of harmony. This, therefore, requires a kind of intellectual process for its appreciation. Quality, as we have seen, is but another name for harmony, and must be appreciated in the same way; the *timbre* of a tone being determined by the number and relative force of the several harmonics that compose it.

However perfectly an organ may appear adapted to a certain function, still any theory of its function based on structure must be considered merely speculative until verified by experiment. Now the inner ear is removed, not less by its delicacy than by its inaccessibleness, from the possibility of satisfactory direct experiment; but here, fortunately, we may take advantage of pathological conditions—nature's experiments—which often guide us as surely as any we might contrive. Some of the following points have been established by post-mortem examinations, but the most of them still require this confirmation.

We may have a diminution of hearing-power for noises without a corresponding diminution of the power to distinguish musical tones, and *vice versâ*. The watch may be used to determine the one condition, a musical box to determine the other. It is probable that in the former case the vestibular and ampullar structures are chiefly affected; in the latter, the cochlear.

Again, as some persons are blind to certain colors, so others are deaf to certain notes. These defects in the range of audition are most frequently found in the higher notes, sometimes in the lower, and more rarely in the middle of the series. For the defect at either end of the series, the explanation at once suggests itself that either the higher or the lower strings are wanting, or that, as a whole, the apparatus is tuned to a lower or a higher pitch. For a defect in the middle notes, we must suppose either an arrest of development of the corresponding strings, or their subsequent morbid alteration or destruction. It is clear that a destruction of the nerve-filament connected with a string, or of the brain-cell from which it takes origin, would produce the same effect.

Instead of deafness to certain notes, there may be a painful hyperaudition of them. This must probably be referred to a morbid sensibility of the nerve or its originating cell, unless we suppose the string in question to have one or more others tuned in unison with it, and with a like nervous connection, or to have its vibrations reinforced by the resonance of some other structure.

Perhaps the most curious condition is that in which a certain note is heard not as a single one, but as a discord formed by the association of the note with others immediately above and below it. Here we may imagine that the "cement" between the proper respondent string and its neighbors has become hardened, destroying its isolation, so that it cannot vibrate without compelling them to do so. And, though the vibrations of all may possibly be synchronous, yet the brain will interpret the message from each string as indicating that note to which it was meant to respond. This affection may be termed *diplakousis monauralis*, to distinguish it from another, *diplakousis binauralis*, in which a given note is heard of differing pitch by the two ears.

There are some frightful cases where persons in apparently sound health become totally and hopelessly deaf in a few minutes. They are seized with apoplectic symptoms, in which giddiness and loss of equilibrium are especially prominent; the attack passes off speedily; but permanent deafness remains. This is due to hemorrhage into the labyrinth, known as *Menière's disease*. The same effect may result from fracture through the bony labyrinth—a frequent situation of fracture by *contre-coup*, since the petrous bone is here weakened by its numerous chambers, while it lies in the line of transmission of force from the vertex to the base of the skull.

The loss of equilibrium, just mentioned as dependent on labyrinthic lesions, points to a function of the semicircular canals as yet imperfectly understood. We only know that, in some unexplained way, these do seem to preside over equilibrium, and that an animal will turn or fall in one way or another according as one or another of them is injured.

Deafness may be produced by syphilitic inflammation of the labyrinth. Many of these cases present all the symptoms of Menière's disease; but, if their syphilitic origin be established, the prognosis, instead of being hopeless, is quite favorable.

Purulent inflammation of the labyrinth is not infrequent, and it is especially apt to occur as secondary to cerebro-spinal meningitis.

Dr. A. H. Smith drew attention to the fact that in the East-River-bridge caisson, at a depth of one hundred feet below the water level, and therefore under a pressure of more than three atmospheres above the normal, all sounds, instead of being heightened, were rendered very faint. The men could not hear each other speak across the chamber, and the report of a pistol was no louder than it was said to be on the top of Mt. Blanc. This he thought must be due to the pressure exerted upon the aural structures, interfering in some way with their free vibration.

Dr. Roosa related a case of what he supposed to have been syphilitic periostitis of the labyrinth, simulating Menière's disease in the suddenness and completeness of the loss of hearing, but cured by anti-syphilitic treatment. The loss of equilibrium, so constant in labyrinth-disease or injury, was by no means uncommon as a consequence of aural catarrh, where the sinking in of the membrana tympani produced abnormal pressure on the stapes and the fluid behind it. He gave a recent case in illustration. It was a prevalent notion, that when a broken-down person grew gradually deaf, the trouble was apt to be with the inner ear; but this was far from being the case; the true "nervous deafness" occurred, perhaps, most frequently in robust subjects. That labyrinth-disease did not oftener result from the very common middle-ear affections might be in part due to the almost complete want of connection between the vascular supplies of the two regions.

The speaker could not take his seat without saying how much the profession owed to Dr. Knapp for his work in establishing otology on a proper basis in this country. There was now an excellent opportunity for New York surgeons to advance the knowledge of aural pathology by examinations of the inner ear in fatal cases of cerebro-spinal meningitis. He hoped it would not pass unimproved.

The Chair announced the death of Dr. David A. Smith, after which the meeting adjourned.

Solid Food in Typhoid Fever.—Dr. Samuel D. Turner, of Circleville, Ohio (*The Clinic*), dissents from the views of Flint, Niemeyer, Reynolds, Murchison, and others in regard to use of fluid food in typhoid fever. His experience of eighteen years has taught him that the advantages of solid over fluid food in this disease are as great as the latter is acknowledged to be over the older practice of semi-starvation. He has yet to see the case in which solid food has aggravated in any way a single symptom. Where this has been properly administered he has never known death from perforation of or hemorrhage from the bowels, or from intractable diarrhœa.

Correspondence.

THE FIRST ANNUAL CONGRESS OF GERMAN SURGEONS.

[*Special Correspondence of* MEDICAL RECORD.]

[This letter was received too late for publication in our last number.—ED.]

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—The First Annual Congress of German Surgeons met in the great hall of the *Hôtel de Rome*, in Berlin, on April 10th, 1872. The idea of a Universal German Surgical Association is new, and owes its origin and realization principally to the efforts of Professors von Langenbeck (Berlin), Volkmann (Halle), and Simon (Heidelberg), the first of whom presided at the first meeting and superintended the election of the officers. Of the 124 members who have thus far joined the Society about 100 were present, among whom were visible almost all the professors of surgery and chiefs of surgical clinics in Germany, with a number of assistants and military surgeons. Conspicuous were the elegant and courtly Langenbeck (Berlin), the venerable Emeritus Professor of Surgery in Berlin, Jüngken, the manly and imposing Billroth (Vienna), the nervous and excitable Bruns (Tübingen), Bardeleben (Berlin), Baum (Göttingen), Busch (Bonn), Heine (Innsbruck), Simon (Heidelberg), Dehler and C. Textor (Würzburg), Volkmann (Halle), Wernher (Giessen), Dr. Grimm, Surgeon-General of the Prussian Army, etc. A large number of guests were likewise present, among whom I noticed Spiegelberg and Olshausen, Professors of Obstetrics in Breslau and Halle, and Cohnheim, Professor of Pathological Anatomy in Kiel.

PROF. VON LANGENBECK welcomed the assemblage, and then proceeded to cause the election of the officers for the ensuing year, which resulted in the choice of Langenbeck (Berlin) as President, Bruns (Tübingen) Vice-President, Volkmann (Halle), and Gurls (Berlin), Secretaries, and Trendelenburg (Berlin), Treasurer. Profs. Billroth, Bardeleben, Baum, and Simon were chosen a committee to act with the abovementioned officers in the regulation of the statutes and any chance questions occurring during the year. The statutes, adopted at the second meeting, declare the object of the Association to be a union of surgical capacities (no direct reference being made to nationality) for the purpose of facilitating the exchange of ideas and promoting general scientific labors through personal intercourse. The meetings of the Association are to be held annually at Berlin from the 10th to the 13th of April, are to be occupied by scientific lectures, demonstrations, and debates, and are open to all guests. Every person engaged in Surgery can become a member under certain minor conditions.

After all preliminaries were settled, PROF. R. VOLKMANN (Halle) read a paper on "Comparative Statistics of Injuries occurring in time of War and Peace," in which he described his experience during the wars of 1866 and '70, and came to the conclusion that the results obtained by operations are much better, and in fact the mortality from gunshot wounds is much less in war than during analogous circumstances in time of peace. This statement, which may appear improbable at first sight, when we consider the great difficulties attending the treatment and transportation of the wounded during war, owes its foundation doubtless to the healthy and vigorous constitution of the soldiers, who in Germany are chosen among the strongest and soundest men in the prime of life, whereas a great part of the operations performed in ordinary civil practice are called for by wasting and debilitating diseases. The mortality of complicated fractures of the leg in war is 23 per cent., in civil hospitals, 38; of fractures of the thigh in war, 44; in peace hospitals, 60 to 70 per cent. Under conservative treatment the results are still worse in civil hospital practice, being 32 per cent., whereas, with exclusion of very rapid unfortunate cases, we have a mortality of only 17 per cent. in time of war. Attention was also called to the fact that very extensive comminuted fractures, with as many as twenty small fragments, occasionally united completely without necrosis of any portion. The assertion made by Prof. V., that the fate of a detached piece of bone, whether necrosis or union, is generally decided by the fifth day after the injury, called forth an animated discussion from Profs. Busch, Langenbeck, Bruns, Simon, and Wernher (Giessen), and ended in a qualification of the original assertion.

The second paper read was one on a "Form of Lupus similar to Epithelioma occurring on the Extremities," by PROF. BUSCH (Bonn). The disease which, microscopically, cannot be distinguished from epithelioma, still differs from it in the peculiar manner of its progression in the fact that the adjacent lymphatic glands do not become involved, and in the mode of cicatrization and the contraction of the skin and joints resulting therefrom, in which particulars, as well as in its curability and the absence of danger to life, it strongly resembles lupus. Several similar cases have been observed by Profs. Simon and Wernher, in one of which the amputation of the diseased arm became necessary.

The third paper, on "The minute Appearances in the Tissues on application of Tincture of Iodine," by DR. SCHEDE (assistant in Halle), was a report of a series of experiments on animals, the result of the iodine being first hyperæmia, then swelling, effusion of red corpuscles, which are partly taken up by the lymphatic spaces, and partly organized into connective corpuscles, and gradually undergo fatty degeneration, cessation of circulation, and finally, if the application be repeated, necrosis of the skin and subcutaneous tissues.

The second session was held the next day from 12 to 4 o'clock.

PROF. ROSER, of Marburg, being prevented from appearing, had a short paper distributed, in which he wished special attention paid to the investigation of the micrococcus to which pyæmia is supposed to be owing, and proposed a resolution desiring the government and medical faculties, as well as private individuals, to offer all facilities for a thorough research into the subject. The Association did not, however, appear to be of the opinion that the matter would be benefited by such rapid and impulsive action as Prof. Roser seemed to wish, and took no motion on the question.

DR. TRENDELENBURG (assistant to Langenbeck) reported a case of stricture of the trachea, which made tracheotomy necessary. The stricture was divided with the knife, and during convalescence dilated with bougies, which, the canula still being worn, are now passed by the patient herself through the mouth. She has recovered her voice and breathes easily through the natural orifice, the canula being retained and kept closed only as a safe-guard in case the stricture should again become troublesome. Dr. T. then showed an apparatus (described in Langenbeck's *Archiv* some two years ago) contrived by himself for the purpose of tamponading the trachea in order to prevent the flowing of blood into the bronchi during operations about the mouth and jaws, a prophylactic

tracheotomy having been performed. The apparatus consists of a small rubber balloon, which is attached around the inner portion of the canula, and is inflated through a rubber tube, which passes externally by the side of the canula. To this tube a longer tube with a sponge may be attached and anæsthesia carried on in this way through the trachea. Profs. Langenbeck and Simon have both used this most ingenious contrivance in several cases of operations about the tongue and upper jaw, and consider it of great value, as there is no doubt that the flowing of blood into the minute ramifications of the bronchi frequently causes bronchitis and pneumonia. Prof. Heine suggested that a larger balloon be introduced by the mouth so as to occlude the pharynx likewise and prevent blood from flowing into the stomach (tracheotomy having, of course, been previously performed), as large quantities of blood can be received by the stomach and the patient become anæmic without the knowledge of the surgeon. This manipulation has moreover been performed in one instance by Prof. Nussbaum, of Munich.

Dr. Stilling (Cassel) read a very interesting paper on "The Pathogenesis of Strictures and the minute Anatomy of the Human Urethra," in which he pronounced the penis, according to his microscopic examinations, to be an organic muscle, and the process of erection the result of arterial hyperæmia, and not of venous congestion, as is now generally supposed. The corpora cavernosa are composed entirely of organic muscular fibres, which surround the arterial ramifications and divide the sinuses by means of septa; these sinuses themselves are nothing more than the dilatations of the capillary branches of the arteria dorsalis penis, and open respectively into capillary branches of the veins of the penis. The organic muscular fibres pass into the mucous membrane of the urethra and thus give contractility to the canal. An inflammation of the urethra causes a degeneration of these muscular fibres in a greater or less degree, and thereby the contractility and diameter of the canal become impaired. The microscopic specimens illustrating these assertions were demonstrated to the Association. Further observations will, of course, be necessary in order to decide this question.

Dr. Metzler (Darmstadt) next related his experience in resection of the knee-joint. He had performed the operation in civil practice eleven times with seven perfect recoveries; he made a convex flap downwards, extirpated the patella, as well as all remnants of synovial membrane, approximated the fresh surfaces of the bones, and in case of need held the end of the femur downwards and in apposition with the tibia by means of Malgaigne's sharp thorn, which he passed through the flap into the femur, and from which he had never seen any bad results; the splint he used was the straight English one of sheet-iron with a footboard and bilateral openings at the knee.

The third session was held April 12th, and several very interesting subjects were brought forward. After the appointment of a committee of nine for the purpose of collecting statistics on all subjects relating to surgery, Dr. Bush (assistant to Langenbeck) reported six cases of extensive comminuted fracture of the skull with depression, three of which he presented to the assembly. The cases were all treated by simple elevation of the depressed bone, extraction of loose splinters, and subsequent necrotic portions, in fact, conservatively; trephining was adopted only twice, and then intermediarily when symptoms of paralysis appeared, but without success. Three patients recovered entirely, one is still in process of recovery, and two died. He advocates immediate decision as to the mode of treatment, either conservatively or operatively—that is, by means of the trephine; but then strict adherence to the plan once adopted, no intermediary or secondary trephining, which can rarely be of service in relieving the already diseased brain, and is then employed only as a last resort.

Dr. Mühlvenzel, a military surgeon from Vienna, demonstrated a very simple and convenient field-stretcher, a hospital and ambulance stretcher of crenelated sheet-iron, capable of being placed on a double inclined plane, and the model of an ambulance, all of which are now introduced into the Austrian army, a detailed description of which would, however, occupy too much space.

Dr. Wegner (assistant to Virchow) reported his most interesting and valuable experiments on animals (rabbits, dogs, chickens, and calves) with phosphorus, the administration of which drug he found to promote osseous growth, cause the diploë to become more dense, occasionally similar to ebony, and hasten the formation of callus in cases of fracture. He called attention to the possible value of a rational administration of pure phosphorus (in infinitesimal doses to prevent gastric disorders—of the various salts of phosphorus he had not found any effect) in osteomalacia, rachitis, and fractures. His remarks were illustrated and verified by numerous specimens of bones at different stages of treatment.

Dr. Bidder (Cassel) reported a series of cases of simple fracture of the femur, which were treated merely by extension without compressive splints or bandages, and which united with either none, or from one to three centimetres shortening; a strong development of the muscles or displacement of the fragments would probably necessitate the application of retentive bandages.

At the fourth and last session, April 13th, Dr. Wolff (Berlin) demonstrated a number of thin sections of long bones, to explain his theory on the growth of bones, which he supposes to grow by dilatation and not by apposition and external growth as is generally believed.

Dr. Danzel (Hamburg) reported his experiences at the Marien Krankenhaus at Hamburg, which brought nothing particularly new; and Prof. Heine (Innsbruck) read an interesting paper on "Parenchymatous Injections as a Means of destroying Tumors." He had made injections with pepsine, hydrochloric acid, nitrate of silver and salt water, iodine, &c., injecting 6-8 subcutaneous injection-syringes full every third or fourth day into the periphery and centre of the tumor; in general he had obtained only negative results, in one case, however, which is still under treatment, the injection of dilute hydrochloric acid during eight months produced a considerable waste and shrivelling of both cancerous mammæ, the duration of which good result is still uncertain. He also injected a solution of iodide of potassium and iodine through the rectum into a hypertrophied prostate, which prevented the free discharge of urine, and thereby caused an abscess and consequent waste of the gland, and of course the cure of the patient.

Prof. Billroth rose to warn against the indiscriminate use of such injections into tumors; his results, chloride of gold, argentum nitricum, pepsine, and alcohol having been employed, had been entirely negative, except in one case where the injection of pure alcohol into a large lymphonia of the neck had caused putrefaction of the tumor, acute septicæmia and death on the fifth day. A previous incision into the lymphonia had given exit to a quantity of fœtid brown fluid with a peculiar odor of acetic acid (from the decomposition of the alcohol) and containing numerous bacteria. The body, although in winter, became decomposed very rapidly. Billroth mentioned that he had been engaged in investigations

on the subject of pyæmia for the last four years, and had not as yet attained any definite result, so that he is inclined to regard all positive observations on the fungoid origin of the disease as at best premature.

Dr. Maas (Breslau) said that Prof. Cohn of the same city had discovered bacteria in pure alcohol, even after that same alcohol had been distilled, and that, contrary to the opinion entertained heretofore, the fungus found in yeast occasionally occurs together with bacteria.

Prof. Bardeleben said that according to his experience the quality of the fluid injected is immaterial, if only a large quantity be introduced and brought thoroughly into contact with the tissues; thus pure water would answer the purpose just as well as acids, etc.

Prof. Langenbeck begged to be excused from reading his announced paper on "The desirable Union as to the principles of Treatment in Gunshot Wounds of Joints" on account of the length of the article and the late hour, and only desired to express the hope that the conservative treatment of joint-wounds might become more and more general, and amputation be employed only in such cases where the primary examination shows such an extensive destruction of bone and soft tissue as to preclude all hope of saving the limb.

A silver catheter with a soft rubber tube, designed to be passed through it and left in the bladder in cases of stricture, the catheter being withdrawn, invented and used by Prof. Thompson, of London, were demonstrated.

Dr. Fürstenheim (Berlin) showed a similar article of his own contrivance, which he occasionally uses.

Dr. Adelmann (Berlin) reported two cases of swallowing a fork, in one of which the instrument was removed by gastrotomy, the patient dying some time after of necrosis of the ribs; and in the other the fork was discharged per anum after several weeks.

Dr. Uhde (Braunschweig) gave an account of six cases of transfusion performed by himself for the relief of anæmia and marasmus resulting from excessive loss of blood and suppuration in surgical cases, all of which were unsuccessful; in apposition to these he reported several entirely similar instances, in which the patients recovered without the aid of transfusion, and proceeded to draw therefrom the rather unwarrantable conclusion, that the value of the operation is greatly overrated, that when successful it is generally not necessary, and when necessary is employed too late to be of use.

This being the last article announced, Prof. von Langenbeck expressed his satisfaction at the results obtained during the first meeting, and hoped to see the members all again a year hence, and closed the Congress.

During the forenoons of April 12th and 13th Prof. Simon, of Heidelberg, lectured in the Surgical Clinic of Prof. Langenbeck, 1st, on the differential diagnosis between hydro-nephrotic and ovarian tumors, and exhibited a male patient with an artificial renal fistula in the right lumbar region through which the finger could be passed into the distended cavity of the kidney; and 2d, on the artificial dilatation of the rectum, which can be practised manually, by means of instruments and by the knife. He said that in favorable cases the anus and rectum can be so far dilated as to allow the hand and forearm to pass the sigmoid flexure and the fingers to become perceptible through the abdominal walls near the ensiform process. For instrumental dilatation he uses two Sims' specula; and in dilatation by means of the knife he makes an incision in the raphe towards the coccyx, preferring this method to lateral incisions, or to the perineal flap with posterior basis advocated by Huster of Greifswald. He employs this incision in all cases of operations where a clear insight into the cavity of the rectum is necessary (as for instance in scraping out cancerous tumors of the rectum with the sharp-edged spoon-like curette of Sédillot, a procedure strongly advocated by him and Prof. Volkmann for the purpose of retarding the ultimate fatal end), and in operations for the cure of recto-vaginal fistulæ, old perineal ruptures, wounds of the rectum, where he gives laxatives and prefers easy fluid dejections to the constipating method. He demonstrated two cases of gunshot wounds, one of rectum and bladder, the other a French soldier, of the colon ascendens, which he, Simon, had operated by means of transplantation of flaps of skin and so far closed as to leave only a small opening in the right side. He also showed a bed for wounds of the leg and thigh composed of a number of small cuboid cushions covered with rubber, and so arranged as to be movable at will without moving or lifting the patient, thus preventing decubitus and facilitating the care of the wounds, especially those of the posterior portion of the thigh.

Prof. Langenbeck presented an officer upon whom he had performed resection of the tibio-tarsal articulation, removing two inches of the tibia, the astragalus cuboid bone and part of the os calcis; the patient had recovered almost perfect use of the foot and could walk without fatigue for an hour or more. The capsule and ligaments appeared to have become partly ossified.

The social and bodily interests of the members of the Association were in part cared for by two sumptuous dinners at the Hôtel de Rome, at which numerous toasts were proposed, such as Prof. Bruns on "The Emperor;" Langenbeck on "The present Guests and the absent Members;" Wernher (Giessen) and Busch (Bonn) on "Langenbeck, the Teacher and Friend;" Goachen (Berlin) on "The Ladies;" Gurlt (Berlin) on "Germany Politically and Scientifically United, and Berlin its political and intellectual Capital," &c. The members, besides, met, as is customary in Germany, in the evening at the different restaurants and showed their appreciation of the good beer as native Germans should, refuting by their own persons and names the slanderous reports of the stupefying effects of malt liquors.

Called into life and supported as the German Surgical Association is, by the first talent and ability in the land, its future lies bright before it and promises well for the advancement and cultivation of surgical knowledge.

Paul Munde, M.D.
Formerly of Florence, Mass., late Assistant to Prof. Scanzoni, at Würzburg, Bavaria.

SMALL-POX STATISTICS.

Bureau of Records of Vital Statistics,
Health Department of the City of New York,
May 4th, 1872.

To the Editor of the Medical Record.

Sir:—Dr. Macdonald, who presents in your previous number the very interesting statistics for 1871 of the New York Small-pox Hospital, argues therefrom that because there died 27 out of every 100 natives against 16 out of every 100 foreigners under treatment, there is apparently exhibited on the part of the former "less inherent vigor of constitution with which to withstand the ravages of the disease," and that his figures seemingly support "much that has been written of the physical degeneracy of our race." Although the general statistics of Small-pox in this city show an even greater disparity in favor of the foreign *born* population, they by no means establish the proof of Dr. Macdonald's hypothesis—and for the following reasons:

Out of 1098 fatal cases of Small-pox occurring in New York during 1870 and 1871, the native mortality amounted to 709 and the foreign to 389. Of the

total deaths, however, 550, or more than 50 per cent., took place among children less than ten years old, nine-tenths of whom were native born, but the large majority of foreign parentage. Subtracting from the 709 native deaths those of *native-born children less than ten years old* we have remaining 214 *native deaths of persons ten years old or more*, against 344 *foreign of the same age*. It is within this period of life that comparisons should be confined, as the cases occurring at a previous age are almost exclusively native born, and the fatality of the disease in early childhood is well known to be relatively enormous. We have no figures, unfortunately, showing the nativity of all cases treated during the past two years in this city—but although it is possible that the percentage of mortality in persons ten years old or more may be greater among natives than foreigners, the above figures would seem to deprive Dr. Macdonald's statistics of any alarming significance. I would suggest to the doctor that an examination and comparison of the ages as well as the nativities of his cases may lead him to a similar conclusion.

Very respectfully, CHAS. P. RUSSEL, M. D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 5, 1872, *to May* 18, 1872, *inclusive.*

SWIFT, E., Surgeon.—By S. O. 104, War Department, A. G. O., May 3, 1872, to proceed to Washington, D. C., for the purpose of settling his accounts, and upon completion return to his proper station.

CAMPBELL, JOHN, Surgeon.—By S. O. 107, War Department. A. G. O., May 7, 1872, to report to the Commanding General Department of the East for assignment to duty.

BAILEY, J. C., Surgeon.—By S. O. 65, Department of California, May 4, 1872, assigned to duty as Post Surgeon at Camp Halleck, Nevada.

WEEDS, J. F., Surgeon.—By S. O. 93, Department of the South, May 6, 1872, granted leave of absence for twenty days.

MCELDERRY, H., Assistant Surgeon.—By S. O. 41, Department of the Columbia, April 22, 1872, assigned to duty as Post Surgeon at Fort Klamath, Oregon.

BARTHOLF, JOHN H., Assistant Surgeon.—By S. O. 97, Department of the South, May 11, 1872, granted leave of absence for thirty days, with permission to apply to the Adjutant-General for an extension of thirty days.

KOERPER, E. A., Assistant Surgeon.—By S. O. 87, Department of Texas, May 6, 1872, assigned to duty at Fort McKavett, Texas.

ROSE, GEORGE S., Assistant Surgeon.—By S. O. 76, Military Division of the Pacific, May 8, 1872, on surgeon's certificate of disability, granted two months' leave of absence, with permission to go beyond the limits of the Military Division of the Pacific.

WILSON WILLIAM J., Assistant Surgeon.—By G. O. 72, District of New Mexico, May 6, 1872, assigned to duty at Fort Bayard, N. M.

DELANY, ALRFED, Assistant Surgeon.—By S. O. 72, C. S., Head-quarters, District of New Mexico, assigned to duty at Fort Selden, N. M.

WEISEL, D., Assistant Surgeon.—By S. O. 87, C. S., Department of Texas, assigned to duty at Fort Richardson, Texas.

Medical Items and News.

PHILADELPHIA HOSPITAL.—Dr. James Tyson has been elected Attending Physician to the Philadelphia Hospital, *vice* Dr. Alfred Stillé resigned.—*Phila. Med. Times.*

LEGALIZED DISSECTION.—The Chicago *Medical Times* says that the States of Michigan and Iowa have officially recognized the necessity of dissection, and made ample provision for it by permitting physicians, medical societies, colleges, etc., to claim for this purpose the bodies of criminals and paupers, unclaimed by friends.

JEFFERSON MEDICAL COLLEGE.—Dr. J. M. Da Costa, the well-known medical writer, has been elected Professor of the Theory and Practice of Medicine in the Jefferson Medical College, in Philadelphia, to fill the place made vacant by the death of Prof. Samuel H. Dickson.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.—This Medical Society celebrated the fiftieth anniversary of its organization by a dinner at the Pierrepont House, Brooklyn, on the evening of May 2d. The address of welcome was delivered by Dr. Alexander Hutchins, Chairman of the Committee of Arrangements.

THE LOUISIANA STATE UNIVERSITY.—This University claims to have the largest and most valuable collection of minerals, fossils, shells, Indian relics, preserved plants and flowers, and objects of natural history in the Southern States.

THE NEW YORK HOSPITAL.—The following gentlemen have been elected Governors of the Society of the New York Hospital for the ensuing year: David Colden Murray, Robert Lenox Kennedy, Thomas Hall Faile, John C. Green, Frederick A. Conkling, Nathaniel P. Bailey, Otis D. Swan, James W. Beekman, James B. Johnston, Samuel Willets, James M. Brown, Sheppard Gandy, Robert J. Livingston, William Dennistown, Jackson S. Schultz, George Cabot Ward, George D. H. Gillespie, William B. Hofiman, Edward S. Jaffray, Jonathan Thorne, George S. Oliphant, John E. Williams, William H. Macy, James H. Banker, Merritt Trimble, and D. Willis James.

NEW-YORK ASYLUM FOR LYING-IN WOMEN.—The forty-ninth annual meeting of the managers of this institution, located at 85 Marion Street, was held April 17th, 1872. Rev. John Hall, D.D., presided, and opened the meeting with prayer. Dr. Charles S. Ward, resident physician, read the annual report. Seventy-seven women have received the benefits of the institution within the asylum during the past year, and 259 have received the outdoor treatment. The total number of beneficiaries since the foundation of the charity is 16,588, of whom 3,714 were treated in the asylum.

DEATH OF A PHILADELPHIA FEMALE PRACTITIONER.—Ann Preston, M.D., Dean of the Woman's Medical College in Philadelphia, and for about twenty years professor of physiology and hygiene in that institution, died April 18th, 1872.

HAMILTON COLLEGE, CLINTON, N. Y.—This institution, on account of the presence of small-pox, has been closed since April 17th.

ARMY MEDICAL SCHOOL IN JAPAN.—Three medical officers have left Prussia for Japan, to establish an army

medical school on European principles, in that country. The Japanese Government have promised to spare no expense in founding the establishment and providing it with all necessary equipments; the object being that the Japanese surgeons may be rendered equal in knowledge and practical attainments to the surgeons of the Prussian army.

A Medical Congress, which is to be opened at Lyons on the 18th of September, is to be the medium of discussions upon the following subjects:—1. Epidemics of Small-pox. 2. Gun-shot Wounds. 3. Ambulances in Time of War. 4. Cattle-Plague and the Contagious Typhus of Cattle. 5. The Causes of the Decrease in the Population of France, and the Means of arresting It. 6. The Treatment of Syphilis. 7. The Reorganization of Medical and Pharmaceutical Education in France. 8. The Means of improving the Social Position of Medical men.

The Heaviest Woman in Paris Dead.—Madame Genoit, a Parisian widow, and a pork butcher, died lately, weighing five hundred and fourteen pounds. She was the largest and heaviest woman in Paris.

The Ophthalmological Congress, which was to have been held this year at Berlin, is, in order that it may be less partisan in character, to be held in London instead. The Royal College of Surgeons is to be placed at the disposal of the Committee, of which Mr. Critchett has been elected Chairman, and Mr. Soelberg Wells, Honorary Secretary. The Congress is to be held on the 1st, 2d, and 3d of August.

The New Jersey Drug Law.—The excellent Drug Bill drawn up by the New Jersey Pharmaceutical Association has failed to become a law. When it was called up for final action in the Legislature, it was defeated by a single vote.

College of Pharmacy of the City of New York.—The annual meeting of the College was held March 21st. The election for officers to serve the ensuing year resulted as follows:—*President*, Wm. Hegeman; *Vice-Presidents*, Wm. Neergaard, J. Coddington, P. Balluff; *Treasurer*, Wm. Wright Jr.; *Secretary*, H. A. Casselbeer, Jr.; *Trustees*, P. W. Bedford, G. C. Close, A. C. Dung, D. Hays, E. L. Milhau, M. L. M. Peixotto, C. Rice, D. C. Robbins, A. W. Weismann; *Delegates to the American Pharmaceutical Association*, P. Balluff, F. Hoffmann, E. L. Milhau, C. Rice, D. C. Robbins.

A German University at Strasbourg.—Since the conquest of Alsace by the Germans, arrangements have been made for establishing a university at Strasbourg. An imperial credit of 200,000 thalers is opened, and receipts will be added from other sources. There will be 42 ordinary and 20 extraordinary professors in the institution.

Waldeyer (Anatomy); Hoppe-Seyler (Physiological Chemistry); Von Recklinghausen (Pathological Anatomy); Schmiedeberg (Materia Medica); Leyden (Medicine); Lucke (Surgery), and Gusserow (Midwifery), have accepted positions as ordinary professors.

"Dr. Lostorfer's Lesson."—This is the title of a paper in the *Cincinnati Lancet and Observer* by Z. C. McElroy, M.D., Zanesville, Ohio, in which the brilliant results of Prof. Salisbury, of Ohio, in his microscopic investigations of the blood in syphilitic persons, are mentioned. Its lesson, it seems to Dr. McElroy, was lost in consequence of his technology—that is, in regarding the changed forms of structure which his microscope revealed as vegetable parasites, a something totally different from the human body in which they are found, rather than as materials natural to it, on their way upward to its natural forms of structure, modified by a mode of force stored up in the so-called syphilitic virus.

He believes that Prof. Salisbury made a brilliant discovery, none the less so on account of its verification by Dr. Lostorfer. It only remains for the profession to utilize it by combining it in a synthetical scheme, plan, or science of life, for which purpose there is the most ample materials already accumulated, waiting only for the master builders to do their work.

Death from the Presence of a Piece of Needle in the Heart.—The *Cincinnati Lancet and Observer* states that at the post-mortem examination of Miss Hoag, of Evanston, Ohio, it was found that death was caused by the presence of a piece of needle in the heart. The needle was driven in by a sudden fall when she was about seven years old. The portion of needle extracted was about an inch and one-eighth long and of large size. The Editor remarks, "How life could have existed after it entered the heart, is a mystery even to medical men."

Transactions of the South Carolina Medical Association.—This pamphlet contains the proceedings of the annual session of this association, held in Charleston, S. C., April 5th and 6th, 1871—being the third meeting since reorganization. Drs. F. Peyre Porcher, Francis L. Parker, F. M. Robertson, J. F. M. Gedings, Geo. E. Trescott, Middleton Michel, of Charleston, S. C., and R. W. Gibbes of Columbia, S. C., contributed interesting and practical papers in medicine and surgery.

The following officers were elected for 1871: *President*, Dr. F. Peyre Porcher, of Charleston; *First Vice-President*, Dr. Robt. W. Gibbes, of Columbia; *Second Vice-President*, Dr. A. P. Wylie, of Chester; *Third Vice-President*, Dr. D. S. Price, of Marion; *Recording Secretary*, Dr. T. Grange Simons, of Charleston; *Corresponding Secretary*, Dr. S. Baruch, of Camden; *Treasurer*, Dr. F. L. Parker, of Charleston.

Willard Asylum for the Insane.—According to the Third Annual Report of this Institution for the year 1871, forty-seven different counties in the State of New York have patients there. December, 1871, there were 527 insane patients. Of these, 406 were females and 121 males. The whole number received during the year was 315. Since the opening in October, 1869, 624 insane persons have been cared for. The charge for maintenance here is uniform, viz., two dollars per week per patient. On the completion of the buildings, on December 1, 1872, it is calculated that from 750 to 775 of the pauper insane will be domiciled here. Notwithstanding this most gratifying exhibit, it will nevertheless remain a melancholy fact that over five hundred of the chronic pauper insane of the State of New York will still remain inmates of the poor-houses, without proper care and protection. The Resident Medical Officers are as follows:—John B. Chapin, M.D., *Superintendent*; Charles L. Wells, M.D., *Assistant Physician*; James C. Carson, M.D., *Assistant Physician*.

New York State Inebriate Asylum, Binghamton, N. Y.—The annual report of the Superintendent and Physician, for the year 1871, has come to hand. Number of patients received since the Asylum opened, May 1, 1867, 1,017. Number of patients in Asylum January 1, 1871, 71. Patients admitted since January 1, 1871, 244. Patients treated, 315, and 230 discharged. Present number of patients, 85. Of the 230 discharged, 184 were discharged with great hopes of a permanent re-

formation. Discharged unimproved, 46. Of 244 admitted during the past year, 226 used tobacco, 149 were married, and 95 were single men. Age of the oldest patient, 63; of the youngest, 19; average age, 36. Deaths, none. 147 were constant drinkers, and 97 periodical drinkers. 165 drank whiskey; 64 indulged in brandy, gin, and wines; 15 used opium. New York City contributed 27 patients; Brooklyn and other parts of the State 90; Connecticut, 11; New Jersey, 10; Ohio, 10; Pennsylvania, 18; Canada, 12; and Massachusetts, 9. Of the occupations, 19 were book-keepers; 29 were clerks; farmers, 15; lawyers, 25; merchants, 45; manufacturers, 14; physicians, 6; 21, no occupation. Daniel G. Dodge, M.D., about two years ago was placed in charge as Superintendent and Physician of the Asylum. He is ably assisted by Mr. Carroll Hyde, Secretary, a former patient of the Institution. Dr. Willard Parker is the popular *President;* Wm. C. Wey, M.D., *First Vice-President;* George Burr, M.D., *Second Vice-President.*

A Plea for Scientific Reform.—Rev. Theodore L. Cuyler, D.D., of Brooklyn, New York, in the New York *Evangelist* for December 7, 1871, sharply criticised the work on "Stimulants and Narcotics," by George M. Beard, M.D. This author, in a pamphlet of twenty-three pages, replies in the form of a letter, styled "A Plea for Scientific Reform," or the "Attitude of Physicians and Scientists towards the Temperance Cause." Advocates of alcoholic drinks and total-abstainers will be equally interested in perusing the discussion between these professional gentlemen—one being a distinguished Presbyterian clergyman and an eloquent advocate of the temperance cause; the other, a popular writer on medical topics.

Inebriety by Inheritance.—Dr. Wm. C. Wey, of Elmira, New York (Pro. American Association for the cure of Inebriates), states that, out of 360 patients admitted to the New York State Inebriate Asylum, 42 confessed themselves to be the off-spring of intemperate patients, representing one in eight. Thirty-six had intemperate fathers, or one in ten. Six had intemperate mothers, or one in sixty. Nine had intemperate brothers and sisters, or one in forty. Sixty-six had intemperate ancestors, exclusive of parents; on paternal side thirty-six, or one in ten; on maternal side thirty, or one in twelve.

Styptic Cotton.—Dr. Robert Rohland, of this city, has prepared a Styptic Cotton (*Gossypium Stypticum*) which promises to be a useful addition to the means of arresting passive hemorrhages from extensive surfaces. It has the advantage of cleanliness and convenience, and possesses no irritating properties. It is prepared by boiling the cotton in a solution of alum and gum of benzoin, and, after the cotton is dried and picked, it is saturated by perchloride of iron. It is put up in boxes of convenient size.

Frank Wells, M.D., formerly of Boston, Mass., has recently been appointed Professor of Obstetrics and Diseases of Women and Children in the Cleveland Medical School, in place of the late Dr. Charles A. Terry.

An Aged Operator and a Tough Patient.—Dr. Joseph Stevens (*The Clinic*), aged eighty-two years, recently amputated the thigh of a patient sixty-six years old, for obstinate and extensive ulceration of the foot and leg, of forty years' duration. On the second day the patient sat up in bed and shaved himself, and before the end of a week was able to get out of bed without assistance each morning, to have his bed arranged.

Scarlet Fever.—The Editor of the *Indian Medical Gazette* remarks that scarlatina is unknown in India.

An Old Toper argues thus: If water rots the soles of your boots, what effect must it have on the coat of the stomach?

Insanity in California.—Dr. Henry Gibbons, of San Francisco, Cal. (*Pacific Med. and Surg. Journal*), asserts that the prevalence of insanity in California is a subject of frequent notice. In the State Asylum at Stockton there are upwards of 1,000 patients. Every day adds to the number, which increases in a much greater ratio than the general population. It is remarkable how large a proportion of the victims come from the muscular stratum of society—men and women of coarse nerves, uncultivated and unrefined.

Soothing Syrup.—Dr. W. F. McNult, of San Francisco, Cal. (*Pacific Med. and Surg. Journal*), alludes to the baneful effects and the enormous consumption of "Mrs. Winslow's Soothing Syrup" in this country. About one hundred thousand two-ounce bottles of it are sold annually in San Francisco, containing about one hundred and eighty thousand grains of morphia, which are given every year to the babies of California. It is fair to presume that there is seventy-five times that amount used in the whole United States, which would make 15,000,000 ounces of syrup, or about 14,000,000 grains of morphia. He inquires: "How much of the physical disease, of the drunkenness, of the degradation and of the vice, and how many of the weakened intellects, are due to use of soothing syrup in infancy?" (Give it up!—Ed.)

Births and Deaths in London.—In London and twenty other large towns in the United Kingdom, for the first week in April, the number of deaths was 4,091, and of births, 5,199. In London for the same week there were 1,641 deaths and 2,250 births; and these are about the regular proportions of births and deaths from week to week.

The Brompton Cancer Hospital, London.—This hospital was established in 1851, and is ultimated intended to accommodate 300 patients. From 1851 up to 1869 it has afforded relief to 8,546 patients.

Vital Importance of a pure Water Supply.—Some very interesting facts in relation to water consumed in London, and its effect in spreading cholera when that contagious malady prevails, have been recently published by the Sanitary Board of London. In the epidemic of 1854 a great experiment was performed by two water companies on the homogeneous population of South London: one supplied the inhabitants of 40,000 houses with Thames water through which the cholera fluid was distributed by the metropolitan sewers; the other supplied 26,000 houses with less impure Thames water drawn from the river above Teddington Lock. In the houses supplied with the impurest water, 2,443 persons died of cholera during 17 weeks; in the houses supplied by the other company only 313 persons died of the epidemic during the same time. The difference was found to prevail week by week, street by street, and the complete subsequent investigation established as an incontestable fact that the mortality by cholera bore a definite relation to the quantity of sewage, of cholera matter in the water supply of London. The same law was found to prevail in other cities, and to apply to individual dwellings; and it was corroborated remarkably by the outbreak of 1866 in East London.

New York has a great advantage over almost any other large city in the world in her Croton water supply, and if ventilation and cleanliness were rigidly enforced it would necessarily be a very healthy city.

Physicians' Relief Fund of Chicago, Illinois.—On the 25th of March, 1872, the Chicago Medical Com-

mittee, appointed in October, 1871, to receive and distribute moneys, etc., to those members of the regular profession who had been placed in need, made their final report. Dr. N. S. Davis, the Treasurer, received altogether $9,881.08. Of this sum, $32.50 was used for stationery, postage, and express charges. The remaining $9,848.58 was appropriated to the relief of 91 practising physicians, and 21 medical students, in sums varying from $30 to $350. The money was not distributed all at once, but it was given out from time to time, as often as a sufficient sum accumulated in the treasury. The sums were received as follows: from the physicians of New York City, $5,800.00; Brooklyn, N. Y., $1,338.00; Philadelphia, $1,115.00; Cincinnati, $457.00; St. Louis, $100.00; San Francisco, $253.08; Washington, $200.00; Boston, $157.00; Lowell, Mass., $105.00; Rensselaer Co., N. Y., Medical Society, $75.00; Boyle Co., Ky., Medical Society, $35.00; physicians in various parts of the country, in small sums, $246.00. Total, $9,881.08. Total paid out, $9,867.50. Leaving a balance of $13.58 now in the hands of the Treasurer, which will be given to the first physician in good standing among the sufferers by the great fire, who may be disabled by sickness, or otherwise placed in need.

Scurvy in the North Carolina State Penitentiary.—In a recent number we noticed the fact, reported in one of the Parisian Journals, that during the siege of that city, although numerous cases of scurvy occurred among the inmates of the prisons for males, no cases whatever were observed among the female prisoners, although the diet had been similar in the two instances. We have lately received a communication from Dr. William G. Hill, Physician to the State Penitentiary of North Carolina, in which he remarks that about the middle of July last, this disease broke out in the institution named, owing to deficiency in the supply of vegetables, and the number of cases rapidly increasing, sixty-three of the three hundred and seventy-two men were attacked with the disease (or nearly one in every six), while he does not mention a case as occurring among the women, seventeen in number. It would be of interest, in connection with this subject, to know if the females, in consequence of duties about the kitchens, had facilities, denied to the men, for obtaining vegetables. The addition of potatoes and onions to the dietary, with, moreover, apples and lemons for those most affected, speedily brought the disease to an end.

A Prize of 500 francs is offered by *La Société protectrice de l'enfance* for the best thesis on The Causes of Rachitis; the papers (in French) to be addressed, postage paid, to Dr. Alexander Mayer, 17 Rue Béranger, Paris, by whom they must be received before November 1st proximo.

Position of the Epiglottis as a Sign of Probable Longevity.—Mr. Duncan Gibb has volunteered the singular observation that the epiglottis occupies a vertical position in persons who have attained the age of 70 years, and that depression of this cartilage can be taken as a sign that the person will not attain advanced age. He claims to have examined five thousand persons in apparent good health, and in all those who were between 70 and 95 years the epiglottis was vertical.

Edward H. Rulloff.—A writer in the last number of the *Amer. Jour. of Insanity*, in a very interesting article on the psychological features of this man's case, finishes with the following:—"He stands forth as one more, and a conspicuous example of the utter worthlessness of high intellectual endowments, severed from moral culture. Some one has speculated as to how much evil a man perfectly developed intellectually, and thoroughly unscrupulous, might accomplish. Rulloff approaches to the type of such a moral monster; and not the least of all was the terrible moral ruin his own blasted character presents. And, most of all for himself, this hatefulness of his own aspect he never knew. In consequence of his own faults he could have no conception of them. Thus with some capabilities which might have ranked him high in some sphere of usefulness, Rulloff followed the base life of a criminal; passed eighteen out of the fifty-two years of his life in prison as a felon, and finally died 'as the fool dieth.'"

University of Vienna.—The names of Hoppe-Seyler (lately appointed to the University of Strasburg), Kühne (of Heidelberg), and Liebreich (of Berlin) are mentioned as candidates for the chair of Pathological Chemistry in this University. The establishment of a chair of Hygiene is also under discussion.

The Toner Lectures.—Dr. Joseph M. Toner, of Washington, has established a lecture course, the first of its kind in this country. The Trustees are:—The Secretary of the Smithsonian Institute, the Surgeon-General of the Army, and of the Navy, and the President of the Medical Society of the District of Columbia. These lectures are not to be confined to any section or country, and their object is "the advancement of science; that is, a knowledge of the laws of nature in any part of her domain, and particularly such discoveries as contribute to the advancement of medicine."

The Hudson County Hospital of Jersey City, closed May 1. Cause, want of funds.

Small-Pox.—Cases of Small-Pox in New York for week ending May 11, one hundred and fifteen.

Changes in the College of Physicians and Surgeons, New York.—Dr. James W. McLane has resigned the chair of Materia Medica and Therapeutics, and has been appointed adjunct Professor of Obstetrics and Diseases of Women and Children. Charles F. Chandler, Ph.D., has been appointed adjunct Professor of Chemistry. Edward Curtis, M.D., has been appointed Lecturer on Materia Medica and Therapeutics.

New Publications.

Books Received.

A Treatise on Diseases of the Bones. By Thomas M. Markoe, M.D., Prof. of Surgery in the College of Physicians and Surgeons, etc. New York: D. Appleton & Co. 1872.

Worms. A Series of Lectures on Practical Helminthology, delivered at the Medical College of the Middlesex Hospital, London. By T. Spencer Cobold, M.D., F.R.S. Phila.: Lindsay & Blakiston. 1872.

Sciatica, Lumbago, and Brachialgia, etc. By Henry Lawson, M.D., Assistant Physician to St. Mary's Hospital. London: Robert Hardwicke. 1872.

Urine and its Derangements, etc. By Geo. Harley, M.D., F.R.S. Fellow Royal College of Physicians, etc. Phila.: Lindsay & Blakiston. 1872.

Table I. Mortality of the United States (by States and Territories), with distinction of sex and percentage of deaths to population, at the census of 1870, 1860, and 1850.

A Treatise on the Diseases of Infancy and Childhood. Second Edition, Enlarged and Thoroughly Revised by J. Lewis Smith, Curator to the Nursery and Child's Hosp., &c. Philadelphia: Henry C. Lea. 1872. pp. 741.

Original Communications.

THE

BLOOD-CRYSTALS AND THEIR PHYSIOLOGICAL IMPORTANCE.

READ BEFORE THE NEW YORK MEDICAL JOURNAL ASSOCIATION.

By S. WATERMAN, M.D.,

NEW YORK.

The blood-corpuscle is the highest developed organized cell known. Its atomic weight and complex composition are the marvel of the analytical chemist. The discovery that these blood-corpuscles contain a crystallizable substance is of recent date. The first observations were made by Reichert, Kölliker, and Funke, and still later by Lehman, who gave to these crystals the name of "Blutcrystalle" (blood-crystals). This physiologist was, however, but partially aware of the great physical importance and function of this crystallizable albuminoid, for in his *Handbuch der physiologischen Chemie*, he says, "that owing to the entire absence of knowledge respecting the chemical constitution of this substance, we are unable to form any opinion regarding its genesis."

Even as recently as 1858, Rudolph Virchow did not assign to these crystals any special function. He noticed the fact that they behaved in certain respects like organic substances, inasmuch as they become larger through the action of certain agencies, and smaller through that of others, without any change of form. He was also aware that the form of crystallization was very different in different classes of animals, and he adds, "that hitherto it has not been possible to discover any satisfactory reason for their existence, or to obtain any insight into the nature of their substance. And yet he knew the fact that these crystals were affected by oxygen and carbonic acid precisely as the blood is; that they become bright red with oxygen, and dark or bluish red with carbonic acid. In common with the former erroneous views of writers upon this subject, the coloring pigment of the blood was described by him as hæmatine, yet Lehman had already demonstrated that the insoluble substance so rich in iron is not found as such in the blood, but that it is in reality a product of decomposition of the true pigment of the blood, now known as hæmato-crystalline, hæmoglobin, or cruorine.

The great practical importance which attaches itself to the solution of the inquiry regarding the nature and function of this substance and others, must be my apology for making it the subject of some general remarks.

The spectroscope, which may now be considered as having fairly entered into the service of medicine, has thrown a flood of light upon this and kindred inquiries, and has revolutionized many theories formerly entertained regarding the mysterious processes within our economy; and the results already obtained cannot fail to exert a definite influence upon our conception and treatment of disease.

Recent researches, aided by spectroscopic observations, have demonstrated that the blood-crystals, the hæmato-crystalline, are actively at work in the economy to sustain the processes of respiration, oxidation, and oxygenation; that through their instrumentality alone the oxygen of the air is attracted and bound to the blood-corpuscles, which by the heart's action is carried into the intricate recesses of the capillaries; there they give up their oxygen to the oxidizable tissues, with which they form energetic combinations; that in return for its oxygen thus given up, the hæmato-crystalline as energetically combines with carbonic acid, the product of combustion, which acid it carries back to the heart and lungs for final elimination. It has been fully demonstrated by experiments, that so long as the hæmato-crystalline remains the same in quality as well as quantity, the supply of the oxygen to the economy is subject to relatively small oscillations; and with the increase and decrease of this substance, or with any change of its integrity, rises or falls the degree of vitality in an individual's life. That it is beyond any question the hæmato-crystalline, and not any other substance of the blood, which enters into and sustains the vital exchanges between oxygen and carbonic acid, has been fully proved by spectroscopic observation. Hæmato-crystalline in solution is able to absorb oxygen as well as carbonic acid with the greatest facility. It can exist like the blood itself in a double state of oxidation, corresponding to arterial and venous. It can be oxidized and deoxidized at pleasure; it presents the same absorption bands as the blood does, and in the exact part of the spectrum it enters into precisely the same combinations with other irrespirable gases; and all and every optic appearance which blood presents when acted upon by chemical agents, are also faithfully reproduced when the same agents act upon a solution of hæmato-crystalline.

As to the absolute quantity of hæmato-crystalline, experiments made show, that in the total volume of the blood in man 9 to 12 per cent. is contained; in the moist corpuscles, freed from serum, it rises to 18 and 20 per cent.

In reference to the rapidity with which oxygen is absorbed by this hæmato-crystalline, we refer to Pflueger's highly instructive experiments upon dogs. He forced these animals to inhale pure nitrogen gas. In 30 seconds the highest point of dyspnœa was reached. At this point some blood was abstracted under great precaution, and tested for oxygen. It was found that its quantity of oxygen had been reduced to a minimum, being 1.0 to 2 per cent., whilst the blood abstracted from the same animal, immediately before it inhaled the nitrogen, contained 18 6 per cent. of oxygen. As soon as these animals were permitted to inhale again pure air, the dyspnœa disappeared, and they seemed to be as well as ever.

Preyer made the observation that one gramme of hæmato-crystalline had the capacity to bind 1.27 cubic centimetre of oxygen; and Hoppe Seyler determined that the blood of dogs contains, on an average, 13.79 per cent. of oxygen. Pflueger gives the amount of oxygen contained in the human arterial blood as 16.9 per cent. Blood-serum contains of this gas only 01.—02 per cent. of oxygen. The more compact the blood, the greater the amount of hæmato-crystalline, and so the reverse. In many animals, especially in those that hibernate, the quantity of hæmato-crystalline diminishes gradually during the winter's sleep; and we find, on examination, that their blood has lost much of its density.

According to the analysis of C. Schmidt and Hoppe Seyler the hæmato-crystalline from dogs has the following composition:—

C 53.64, H 7.11, N 16.19, S 0.66, Fe_2 0.43, O 21.02, P_2O_5. 0.91, alkalies 0.04—100.00. These proportions differ in various animals and man, but not to a very great extent.

Hæmato-crystalline crystallizes in beautiful rhombohetric plates, at times also in prisms of a beautiful red color. They cannot be obtained free from the coloring

pigment, owing to the extraordinary tenacity with which it clings to the hæmato-crystalline.

One of the most interesting properties of hæmato-crystalline is its capacity to combine with destructive energy with many irrespirable gases, whereby its own integrity is sacrificed, and its life-sustaining power is lost forever.

These combinations are unlike those into which it enters normally with oxygen and carbonic acid, transitory and easily effected; on the contrary, they are irrevocably permanent, and any further absorption of oxygen, when thus combined, becomes absolutely impossible. This fact is evidenced by various crystalline forms of peculiar consistency and durability. With carbonic oxide it forms carbonic oxide hæmato-crystalline; with prussic acid, cyanite of hæmato-crystalline, and so forth.

Hæmato-crystalline is the most indestructible substance known.

No matter how long it has been mixed with fluids undergoing putrefaction, it retains its characteristic features, especially its optic relations, as evidenced by the spectrum test. I look upon this stability and indestructibility as the most important, nay, principal factor of animal life, and any pathological condition affecting this stability must also affect the stability of life itself.

All these interesting and demonstrable facts have been ascertained by means of the spectroscope. By its analytical power we have become acquainted with the changes these blood-crystals undergo when acted upon by various chemical agencies, and thus obtained an insight into the processes of life which a decennium ago we had no hope of ever obtaining.

Some interesting points, however, still await explanation. Under the spectroscope the hæmato-crystalline of animals, and birds, and fishes produces like optic relations, yet we know they differ to some extent in their composition and their forms of crystallization. The spectroscope can throw no further light upon this inquiry, and we may suppose we have arrived at the limit of an investigation of a substance so subtle in its composition as to defy further recognition. Thus the blood of man and of many carnivorous animals crystallizes in prismatic and rhombic columns and plates. The blood of the guinea-pig, of the rat, and the mouse in beautiful tetraheters; the blood of the squirrel presents hexagonal plates; in fishes we have fine prismatic needles, and so on. They also differ in different animals in solubility and sinking capacity.

COMBINATIONS OF HÆMATO-CRYSTALLINE WITH IRRESPIRABLE GASES.

When carbonic oxide gas is inhaled it is absorbed by the blood-crystals, and a combination results which is permanent and inseparable. Carbonic oxide hæmato-crystalline is formed. The blood-crystals permanently bound to the carbonic oxide have no longer any affinity for oxygen, and is by them no longer abstracted from the air, all processes of life depending upon the presence of this vital gas; respiration, oxidation, and oxygenation are suspended, and death ensues from asphyxia. No amount of oxygen artificially introduced into the system will avert the result, if the entire quantity of hæmato-crystalline of the blood has entered the fatal partnership. Where a limited quantity only has been affected, recovery is possible. One fact pointed out by Stricker is consoling, in view of this fatal affinity. The absorption of carbonic oxide takes place comparatively slower than that of oxygen, and therefore it takes longer to convert the hæmato-crystalline into carbonic oxide hæmato-crystalline. In this connection I may mention a fact of great therapeutical interest, to wit: that the addition of a small quantity of any acid to the blood causes a part of the oxygen to be more firmly bound in such a manner that it is no longer possible to eliminate from the blood the entire quantity of this gas. May this not to some extent explain the efficiency of the mineral acid treatment in zymotic and septic disease?

The spectral phenomena presented by blood thus combined with carbonic oxide, differ little from blood in its normal condition, but yet sufficiently so to determine in forensic cases and others. The blood bands are in a normal condition changed by any agent capable of withdrawing the oxygen; such agents are called reducing agents. The carbonic oxyde hæmato-crystalline is, however, not spectroscopically affected by the action of reducing agents, and thus we possess a very efficient means to determine cases of poisoning with carbonic oxide gas. Hoppe-Seyler and Preyer have produced the crystals of the carbonic oxide hæmato-crystalline, which are even more stable than simple blood-crystals.

Nitric oxide hæmato-crystalline results from the action of nitric oxide gas upon blood, or hæmato-crystalline previously treated with hydrogen or ammonia. Under this condition it expels oxygen as well as carbonic oxide from their combinations with hæmato-crystalline, and combines with it. The blood thus acted upon by nitric oxide loses its capacity to be affected by reducing agents; nitric oxide hæmato-crystalline crystallizes in rhombic prisms.

Nitrous Oxide Gas.—Hæmato-crystalline is undoubtedly affected by nitrous gas, but as yet the exact mode is not known. The effects of this gas upon the blood does not seem to appear at once, and on this account its pernicious influence is greatly overlooked. But no intelligent observer who has ever witnessed the ghastly, cyanosed appearance of persons who have inhaled this gas until its anesthetic effect is produced, will deny that the ensemble of the symptoms—the convulsive action of the lungs and heart, the bloodshot eyes ready to burst from their sockets, the convulsive contraction of the voluntary muscles—that all these together, betoken a powerful influence upon the blood mass which endures for hours and days after the inhalation has ceased. I have seen several cases where nausea and vomiting and severe headache remained for a length of time, and I have seen at least one case where the inhalation of this gas was followed by severe pulmonary and cardiac disease and death. The profession at large may yet have to modify its opinion regarding its freedom from danger after its application.

Carburetted, sulphuretted, and phosphuretted hydrogen, when acting upon blood for some time and in a concentrated state, produce a permanent change upon its hæmato-crystalline, the precise nature of which is as yet not fully understood. They do not seem to form any compound with hæmato-crystalline, but they seem to destroy its capacity for absorbing oxygen. No treatment is known by means of which blood deoxidized by the agency of these irrespirable gases can be again transformed into oxidized blood. Experiments made by Stokes seem to point out that hæmato-crystalline is disintegrated by the chemolytic force of these gases.

Combination with Prussic Acid.—Hæmato-crystalline combines with prussic acid, and forms cyanate of hæmato-crystalline, which has been produced in crystals of a very stable nature. They can be recrystallized without losing much, if any, of their prussic acid. The spectroscope gives the well-known blood bands, and by the action of deoxidizing agents the spectrum of reduced blood is obtained.

The question in what manner prussic acid destroys life is still unsettled. The blood-corpuscles, in case of poisoning with this agent, do not retain any of this acid, as they do when brought in contact with it directly. Yet there is no doubt that a most powerful effect is exerted by prussic acid upon the blood-crystals; and if the spectroscope fails to register any very definite change, it is probably owing to the extreme volatility of this gas, which in the body is somehow or other abstracted again from the hæmato-crystalline. The brief contact, however, is sufficient to bring about destruction of life, by absorbing all the oxygen of the hæmato-crystalline, and by changing the integrity of these crystals in a manner, that they are no longer capable to absorb oxygen from the air.

It is instantaneous Death of the Blood-crystals.—When blood is acted upon by any acid, alkali, or alcohol, except prussic acid, the hæmato-crystalline is chemolyzed into albuminous substances, and a colored matter containing all the iron, but none of the sulphur, of the original compound. This is hæmatin. It is chiefly interesting in being found ready formed in the system. It possesses the respiratory and life-sustaining power peculiar to hæmato-crystalline, but in an inferior degree.

Cruetine is another interesting derivate from hæmatine. Both substances can be crystallized. It also possesses the breathing power of the blood-crystals.

Hæmatoidine is a crystalline substance, first described by Virchow. It is a product of retrogressive metamorphosis, spontaneously formed within the economy in apoplectic effusions and extravasations.

He assigns the crystals of hæmatoidine to the rhombic system, mostly appearing in columns of a beautiful yellowish red. He further thinks that "hæmatoidine may be considered the regular typical ultimate form into which hæmatine is converted in any one part of the body, where large masses of blood lie extravasated for any length of time." According to him an apoplectic effusion of the brain cannot be repaired by any other process than by a large portion of such blood undergoing this form of crystallization, and if we find afterwards a colored cicatrix at the spot we feel perfectly sure that the color is dependent upon the presence of hæmatoidine. This proposition thus far is probably true. We find blood-crystals of the described form in old extravasations, differing in some essentials from hæmato-crystalline, but we have no evidence whatever to support his view that hæmatoidine is changed hæmatine. Neither chemical nor spectroscopic tests sustains this assertion, and I agree fully with Dr. Thudicum that the basis of all blood crystallization is hæmato-crystalline, the highest developed crystal known, with an atomic weight reaching, according to Hoppe-Seyler and Charles Schmidt, 13.280.

Virchow further contends, "that when a young woman menstruates, and the cavity of the Graafian vesicle from which the ovum has been extracted becomes filled with coagulated blood, the hæmatine is gradually converted into hæmatoidine, and we afterwards find in the spot where the ovum had lain the beautiful deep-colored hæmatoidine crystals which remain as the last memorials of this episode. In this manner we can count the number of apoplectic attacks, or calculate how often a young girl has menstruated. Every extravasation leaves behind it its little contingent of hæmatoidine crystals, and there, once formed, remains in the interior of the organ in the shape of compact bodies, endowed with the greatest power of resistance."

This view was also entertained by Holm, Staedler, and others.

Spectral analysis has swept away this beautiful theory; it has rent the veil that has shrouded this part of our economy, and shed its full measure of light upon the chemical and vital processes hitherto but imperfectly understood.

The peculiar crystals described by Virchow as hæmatoidine, and the peculiar pigment found in the ovaries of woman, as well as of cows and other mammalias, were submitted to a special examination by Dr. Thudicum, who called the spectroscope to his aid, and who states, "that during the examination of more than 1,200 different specimens of healthy and morbid tissues, he never once met hæmatoidine." He contends that the pigment described by Virchow, and to be found in apoplectic extravasations of the ovaries under the name of hæmatoidine, is a substance differing widely from it in many important particulars. Dr. Thudicum subjected the corpora lutea of animals to a scrutinizing chemical and spectroscopical analysis. He obtained from them a beautiful orange-colored fluid; but he found no extravasated blood in any of the corpora, even to the smallest extent, or any residue or appearance which could have led to the belief that there had been at one time effusion into the cavity or near to the periphery. No crystals of any kind, particularly no so-called hæmatoidine crystals, were ever met with. The solution obtained by pounding these corpora and subjecting them to heat and nitric acid, failed to give before the spectroscope any of the peculiar and well-known blood-spectra; but instead, presented a peculiar absorption band in green, decidedly different in many particulars. This peculiar absorption band is also quite different from that produced by biliary acids and cerebric acid.

From the solid part of the corpora, by boiling with alcohol, a deep yellow solution was obtained, which gave three very peculiar absorption bands in the blue and violet part of the spectrum. He obtained also crystals, which solve in chloroform with a yellow, and, when concentrated, with a fiery orange color; for absolute ether they give a fine yellow solution; in sulphide of carbon a fiery red color. Nitric acid poured over the crystals produces a blue color, which immediately passes into a yellow.

Dr. Thudicum then made experiments with the yolk of the egg, obtaining the same spectral reaction, and precisely the same chemical results. Viewing these results, we are forced to confess that this coincidence is extraordinary, and at once extremely important, because it shows the identity of the coloring pigment in the ovaries of mammalias and the ovaries of birds.

Dr. Thudicum, in his report to the Privy Council of 1868, says: "Upon a comparison of all the data and taking into consideration the chemical reactions above described, we are justified in assuming that:

"I. The spectra of the various extracts from the corpora lutea are identical with those of the extracts from the hen's egg.

"II. *A fortiori*, the body producing the spectra in the corpora is chemically identical with that producing the spectra in the extract from the yolk.

"III. This body is a yellow crystalline substance which has not been hitherto defined, and to which I attribute the name "Luteine."

This luteine is a specific physiological product of certain cell-formations which build up the corpora lutea, and not hæmatoidine which is an abnormal product of a retrogressive metamorphosis, derived from blood extravasated. Luteine is deposited in granules within cells, a product of their chemical life; hæmatoidine is deposited in crystals in the midst of decomposing blood. Dr. Thudicum states, that whenever hæmatoidine is

found within the corpora lutea, it is there in consequence of local disease as a pathological, and not a physiological product; and that in the hundreds of ovaries from cows, sheep, and other animals, he only found twice effused blood in the corpora lutea, and only once in any other part of the ovaries than the arteries and the veins. Bischoff also, in his description, says nothing of the blood-clots referred to by Virchow.

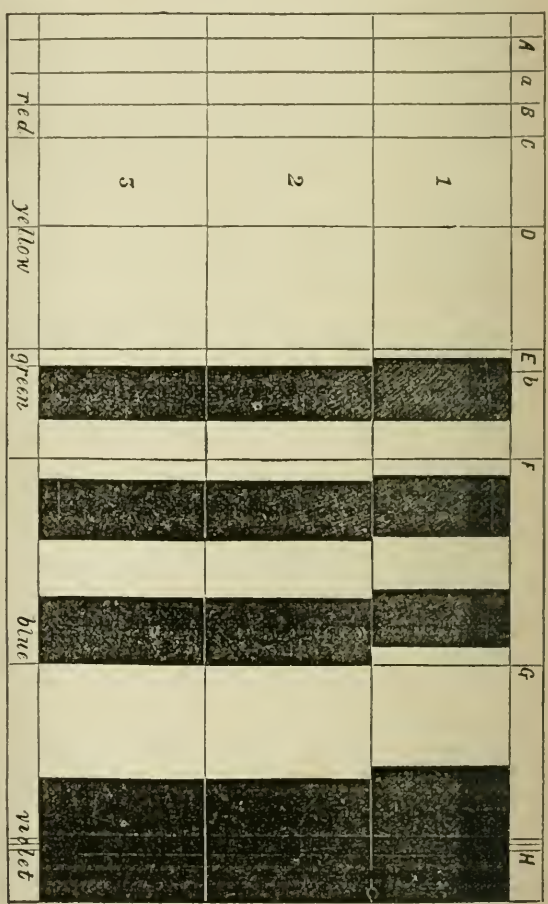
It is further asserted by Dr. Thudicum, upon results obtained by the spectrum test, that hæmatoidine in its relation to light behaves quite differently from luteine; that hæmatoidine, when treated with sulphuric acid, will yield cruentine (compare MEDICAL RECORD Dec. 1, 1871, p. 436), which will present under the spectroscope all the peculiar absorption bands of this substance; but luteine behaves entirely different. When acted upon by sulphuric acid, we obtain first a blue, and then a green color, and when a solution of luteine is submitted to the spectrum test, we obtain an absorption band so different as to dispel all doubt that we have here quite a distinct and characteristic body before us.

In former lectures, as well as to-day, I have dwelled upon the indestructibility of hæmato-crystalline as one of its most wonderful attributes. Luteine, however, has no such resisting force; it is, on the contrary, easily and permanently altered by chemical agents. Nitric acid transforms all derivates of hæmato-crystalline with difficulty into intense yellow substances. Luteine is immediately transformed by this same acid into a colorless or white product. Nor have the crystals of lutine any similarity, either in shape, size, or appearance, to hæmatoidine; their facile solubility in ether, chloroform, or alcohol distinguish them at once from hæmatoidine, which is quite insoluble in these agents.

I would not have dwelt with so much minuteness upon this point, whether the crystals and the pigment found in the corpora were hæmatoidine or luteine, were it not that from a correct and chemically true answer to the question a great practical result would depend. If luteine is a distinct physiological formation, secreted by the cells that make up the corpora lutea (and consequently also the ovaries), it will probably be found in many of the pathological conditions affecting said bodies as well as the ovaries. If so, we should be able to obtain luteine from ovarian tumors, and by it be enabled to verify the diagnosis of ovarian disease. We would thus obtain a most valuable accession to our means to diagnosticate ovarian tumors from other abdominal tumors and ascitis.

I have given this subject my earnest attention, and made several experiments with a view to obtain luteine from the colorless contents of ovarian cysts. I have been encouraged in these efforts by Dr. Peaslee, who has proved to me both a friend and a counsellor. I believe I have succeeded in these experiments. I have been able to obtain a beautiful orange-colored fluid, closely resembling luteine, in all instances where the colorless fluid was known to be ovarian. My procedure was thus: the albuminous matter, so abundant in ovarian cystic fluid, was precipitated by nitric acid and submitted in several instances also to the action of moderate heat. It is the coagulated albuminous mass that contains the luteine. I acted upon this coagulum with a concentrated solution of caustic potash, and obtained in most instances a beautiful yellow, nearly orange-colored fluid. One point was yet necessary to establish, that this beautiful fluid, or pigment thus obtained, was really luteine. It was to be submitted to the spectrum test, and its revelations ascertained. This test I have as yet not been able to supply. The absoprtion bands of luteine lay far into the blue and violet part of the spectrum, requiring, in this instance, an instrument of far superior analyzing power, unfortunately not at my command at the present moment.

Should, as I do not doubt, the spectroscopical examination demonstrate the peculiar luteine spectrum from ovarian fluid, then we have obtained also a highly important auxiliary to diagnosticate ovarian disease. Dr. Thudicum mentioned one case in which the tumor came from a cow. The fluid in this instance was yellow, and yielded two absorption bands peculiar to ovarian luteine. We are, however, seldom so fortunate as to obtain the fluid of sufficient coloration to make the spectral test available without resorting to the chemical manipulation above described by me.



Another inquiry, having reference to blood-crystals, was recently started by Dr. Caldwell, of Brooklyn. This gentleman had dissolved a piece of beef by electrolysis; a small portion of the pulp in a dry state was sent to me for spectral analysis. I found all hæmato-crystalline destroyed, and the coloring pigment resisted the solving power of caustic potass and the acids. Here also the inquiry ended for want of proper instruments; yet I am inclined from the fact that chloride of sodium had been employed in the electrolytic process, that hæmato-crystalline had been converted into a hydrochlorate of cruentine.

A few words concerning hæmine, discovered by Teichman, but by this gentleman lately considered as a modification of hæmatine.

It is never found in the economy, but is an artificial

product from the action of glacial acetic acid upon dried blood. It possesses, however, interest in forensic medicine. Virchow says: "We may produce the crystals of hæmine where the presence of hæmatine was doubtful." He ranks this reaction amongst the most certain and reliable ones with which we are acquainted. This test he thinks extremely important, because it is applicable in the case of extremely minute quantities. These were Virchow's views some time ago. In the mean time, the spectroscope entered the arena and presented tests far more delicate and reliable. Hæmine gives an absorption band far out into the red part of the spectrum; where may be also seen the absorption bands of chlorophyll in unsurpassed splendor. Thus a link is established between vegetable and animal life; the highest developed spectrum of plant life makes its appearance in astonishing proximity to the spectral bands derived from the only artificial compound of blood known to the analytical chemist.

103 W. 49TH STREET, N. Y.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 2, 1872.

DR. E. R. PEASLEE, PRESIDENT, in the Chair.

CEREBRO-SPINAL MENINGITIS.

DR. STEPHEN W. ROFF was elected a Resident Fellow.

Dr. E. H. JANES exhibited a specimen of styptic cotton.

The President stated that the patient from whom the ovarian tumor was removed by him two weeks previously was doing well, the incision of sixteen inches having nicely united.

DR. MOREAU MORRIS made some remarks on cerebro-spinal meningitis. The various symptoms noticed in the present epidemic are chilliness, acute pain in spine and limbs, clonic and tonic spasms, opisthotonos, and sometimes distortion of vision. There is often hyperæsthesia of skin. Rose-colored spots, not disappearing on pressure, are noticeable in this disease; these pass away on the third or fourth day. Herpetic eruptions have been noticed. Epidemic meningitis is non-contagious, and the idea of specific contagion will have to be abandoned. Clinical experience and knowledge of hygienic laws prove that this disease is caused by miasmatic poison. Congestion of blood-vessels, with exudations of fibrin and pus under the meninges of the brain, are prominent lesions.

The first cases of this disease were reported by gentlemen in this city on the sixth of January; and the extraordinary filthiness of the city has caused much anxiety in medical circles since that date. The first series of deaths occurred in a family of 8 persons residing in Eleventh avenue, of which 6 were children from 1 to 13 years of age, under the care of Dr. Sewall. Four children died in Eleventh avenue, and one died after its removal to another house. In the frame dwelling where the disease originated, the first floor was divided up as follows: The front room was used as a tin shop, the rear apartment was the family room, and between these rooms the father, mother, and some of the children slept. The potters'-clay sewer pipe led from the privy vault through the cellar, and was defective. Foul gases emanated from this conductor, and were diffused into a closet where the children were in the habit of playing. The smell, the parents stated, was like rotten dead animals.

Whole number of cases reported to the Health Department to date is 412; deaths, 216. These cases occurred in 360 houses. Five cases occurred in children between 1 and 3 years of age; 125 between 1 and 5 years; 106 between 5 and 10 years; 66 between 10 and 20; 29 between 20 and 30; 17 between 30 and 40; and 20 over 40 years of age.

The drainage was faulty in all the dwellings where cases occurred; and they were ascribed to faulty drainage in the majority of cases. In sections of the city where tenement-houses predominate, with dense populations, especially on the eastern side of the town, there cerebro-spinal meningitis has particularly abounded. These houses have wash-basins without water-traps and overflow pipes; the cesspools having no connection with the sewers. Cases have broken out as well in brown-stone houses, in fashionable localities, with all the Croton water conveniences; in fact, some of these houses have given the Health Board much trouble on account of the imperfect connection with the sewers, etc.

The speaker made clear drawings on the black-board of the general waste and water pipes, water-closets, wash-basins, deficient water-traps, etc., as generally put in by plumbers in the majority of New York houses. The rain-water leader from the roof generally empties into the sewer-pipe in the cellar. To prevent the diffusion of foul gases all over the house, which is a common complaint, the general waste-pipe should be carried to the tops of houses, and open to the atmosphere; in that way the gases could pass off.

A dotted map was shown illustrating the original water-courses and marshes of the island; and it was noted that many cases have broken out in buildings along the edges of these water-courses. These places, by capillary attraction, produce disease. This sanitary fact has been altogether ignored. Basements over these marshy places are never dry, and their walls are covered with cryptograms.

In regard to the meteorological condition for the production of the disease, he stated that this epidemic broke out in January, with the lowest point of humidity.

DR. GURDON BUCK inquired whether the neighborhood of Canal and Centre streets was productive of the disease.

DR. MORRIS replied that he had alluded to the frequency of the disease in that locality.

DR. CHAS. P. RUSSELL spoke as follows: I beg to offer a few remarks, Mr. President, in regard to the mortality statistics of this disease in New York, and its classification. Its first death was recorded in 1861—or, at least, "spotted fever" was assigned as the cause of death in a single instance. No similar case was recorded up to 1866, during which year there were registered 18 deaths from "cerebro-spinal meningitis." In 1867 there were recorded 32 deaths from the same disease; in 1868, 34; in 1869, 42; in 1870, 32; and in 1871, 48. Previous to 1871, these deaths had been included in the zymotic class. We were then led to inquire into the nature of the deaths so returned, and found that almost every case was considered by the attending physician as one of simple inflammation, not due to any zymotic influence, any more than the cerebral meningitis which always figures so prominently in our statistics. Such cases were therefore classified in 1871 under the head of Affections of the Nervous System, and the same rule was pursued in the early part of 1872, until their rapidly increasing number awaked our attention to the presence of an epidemic.

Since then they have all been included in the category of zymotic diseases, and in consolidating our statistics at the end of the year, it will appear proper to so regard every case that has occurred during the year. There seems little doubt that the epidemic variety is due to a specific poison, and is as distinct a disease from the simple idiopathic inflammation as epidemic cholera is from cholera morbus; but at the commencement of an epidemic there is frequently much difficulty in determining the positive character of an individual case.

Dr. Alonzo Clark remarked that Dr. Morris had pretty well exhausted the subject, with the exception of the treatment. He had seen cases where the spinal symptoms were not developed, only the cerebral. In one case of true spinal meningitis the patient remained for two weeks in a state of opisthotonos, and finally recovered. Severe pains in the limbs remained for some time. In other cases the chief pain was in the head, the pain in the limbs subsiding. He remembered one fatal case where pneumonia set in after the brain-symptom had subsided.

In none of the cases in hospital was there any ecchymotic eruption, but a papillary or herpetic variety was noticed, with a depression in the centre resembling small-pox. The ecchymotic eruption which first attracted attention, was not seen in these cases.

In regard to the treatment, if there was no congestion, he ordered leeches to the spine and a vapor bath; but on account of the restlessness of patients, that mode of treatment could not be carried out in hospital. Now the early use of opium is advocated, and is useful. Bromide of potassium is of decided service, but not in connection with opium. At a temperature of 103°, the application of the wet pack is of decided benefit in reducing the temperature. Beyond this we had scarcely advanced.

Dr. Morris' figures gave a mortality of over one-half. One death in four, or possibly one in three, is what Prof. Clark has seen in hospital. He said that at an early stage it would be advisable to take blood.

In answer to a question of Prof. Post he remarked that the temperature could be lowered to 101° by the use of the wet pack.

In reply to Dr. Blumenthal he stated that he had always found the serous effusion under the arachnoid membrane. Fibrous or purulent effusion had been noticed more in this disease than in other diseases of the brain. He has had no case, with the exception of fatal ones, which had a duration of less than two weeks. Stiffness of joints and swellings will remain after the disease has subsided.

According to Dr. Russell the duration of the disease, in fatal cases, has never been more than twenty-four hours. The deaths, in the cases described by Dr. Morris, took place within twelve hours.

Dr. Buck, in alluding to defective house-drainage, which allowed foul air to escape into first-class dwellings, thought it proper for every member of the Academy to advocate the plan of extending the waste-pipe to the house-top. The people should be enlightened in regard to it, and the plan advised by Dr. Morean Morris even made obligatory.

Dr. Anderson regarded the subject of diffusion of foul gases in dwellings as an important one, and one which had occupied his mind a good deal. He had thought that if every waste-pipe was open at the top the gas in escaping would descend and creep into the house again. If all the houses had such pipes the city might not be any better off, as the atmosphere would be so thoroughly charged with foul gases.

Dr. Janes believed, in case the open pipes were carried to the house-top, that there would be oxygen enough in the air to dissipate these foul gases. In some cases a sewer drain under a house where there is no water-closet will produce suction enough to cause bad smells. In tenement houses, without water traps, the waste pipe, which receives all the water from sinks, is a common source of bad smells. He glanced at the imperfect manner of laying pavement in this city; blocks of stone should be laid on a substantial bottom, and in mortar or cement, so as to preclude percolation. In Seventh avenue, for instance, where the wooden pavement has been laid, the cellars are damper than they used to be.

Dr. Post asked Dr. Morris if the rain-water pipe had water-traps, and received a negative reply.

Dr. Morris remarked that the subject of drainage, water-pipes, and water-traps would consume an entire evening. He exhibited models of the "pan," and the "Hopper" water-closets, and showed that the two traps in the first variety do not prevent odors. The experience of the Sanitary Inspectors in relation to defective joints in lead water pipes is that, in those houses built by contract, they are imperfectly closed with mortar rather than lead, as they should be. Where nine houses are built together, there are often only four pipes, of six inches in diameter, leading to the sewer. It is a common thing for two houses to have one common sewer-pipe. Each house should have its own sewer-pipe. The majority of lead pipe, in houses built by contract, is very thin, and will break like a pipe-stem. A much-used contrivance for relieving the water-trap in the cellar, when dish-cloths, papers, or other substances are thrown into the pipe, he thought was objectionable, as the cast-iron cap does not fit tightly enough.

Dr. Willard Parker said that we had a prodigious evil upon us, and it seemed to him that medical men should inquire if it is possible to eradicate it. He asked Dr. Morris if the Board of Health had the power to enforce the necessary regulations.

Dr. Morris replied that it had the power, and so far as it could be done suits had been instituted. But he added that there were only fifteen medical inspectors, who were overburdened with work and irregularly paid, consequently could not do everything. Every medical practitioner has such an intimate relation with his patients and families under his charge that these defects could easily be brought to the notice of the Sanitary Department. He took occasion to assert that physicians should always be *sanitarians*.

Dr. Parker believed that the Board of Health did all it could in this respect, but something should be done by the Academy, such as an able report, which might be made in the course of four or five months. Such a report would be of great service to the inhabitants of this city. He mentioned the epidemic of cerebro-spinal meningitis, which occurred sixty years ago in New England, in the spring of the year. An epidemic had prevailed in Carbondale, Pa., and now very bad cases are occurring in Scranton, in that State. The idea that it always originated from imperfect sewage he discarded, as it existed in towns where there are no waste pipes or sewage. He thought the old physicians treated the disease as well as it is now managed.

Dr. Barry suggested that the lowness of water and low springs might account for the prevalence of the disease, as it is prevailing in those places where there was a scarcity of water.

Dr. Harris remarked that this is the first epidemic which has extensively prevailed in the country. Children and even horses have been stricken down when there were no perceptible local causes. But the local

conditions should be inquired into. The case of a patient, lying low with the disease in a fine house situated on a level with the distributing reservoir, was one in point. The disease is prevailing as far as Worcester, Mass., and in valleys more than hilltops.

He would like to have a system of inquiry instituted in regard to the production of the disease in this city.

Dr. Henry stated that although the Tombs was situated on made ground, were water formerly stood, he had been credibly informed that not one of the officers or employés of that institution ever had jail-fever, which spoke volumes for the attention paid there to the laws of hygiene.

Dr. Morris, in answer to a remark of the President, said that any defect in water or drainage pipes, sewage, etc., which was detrimental to the public health, would be attended to if brought to the notice of the Sanitary Department.

In answer to Dr. Anderson's objection to the open-mouthed waste pipe, the President remarked that sulphuretted hydrogen was lighter than common air, consequently that difficulty was removed.

The announcement was made that Dr. George M. Beard would read, May 16th, a paper on the treatment of disease by electricity.

The Academy then adjourned.

Correspondence.

A CARD TO THE MEDICAL PROFESSION.

THE DIPLOMA TRAFFIC.

My communication to the Record, under the heading of "A Fatuous Profession and Infamous Medical Colleges," having had the desired effect of arousing the attention of the medical profession to the fact that medical colleges may be, and are, corrupters of professional morality, there would be little occasion for me to say more about the matter but for the fact, that in the course of the various and desperate efforts which have been made to present a plausible excuse for acts of a corrupting tendency, by a college whose name I have not caused to be printed, *adhesion to the truth has not been observed.*

First, as respects the report of the Committee of the Alumni Association, signed by its President—whom we all greatly respect—it quite misinforms the "brethren in the profession" by stating that the charge of perjury made by me against a recent alumnus has no foundation, except in the fact that said alumnus and myself "testified to opposing statements in a suit instituted" by myself to recover "fees for medical services."

The facts are, that this alumnus was a drug-shop practitioner, and a newspaper and street-car advertiser of pills, sure to cure "female obstructions," and at the time, or about the time, of his most active operations in this line, the physician attending his family asked me to see, in consultation, one of said advertiser's children who was then very ill, and subsequently died.

I had then never even heard of the man. I saw his sign on the door of the drug-shop, and, on inquiry of his physician, learned the character of the self-styled doctor.

After the death of the child, whom I saw in consultation, said now alumnus sought my advice sundry times for another one of his children. He frequently manifested a desire that I should treat him as one physician treats another, and apparently did not abandon the hope that I would do so, till I sent him my bill. This was done in the same terms and manner that I would send a bill to any layman.

Though my charges were the usual ones for consultations, he not only refused to pay, but became very active in circulating false and scandalous reports about me, and even went so far as to threaten suit for malpractice. As a matter of general professional vindication against the attacks of this kind of creatures, I gave him an opportunity to ventilate himself in court, where the judge, who heard the trial of the case before a jury, declared the history and behavior of this now alumnus as the most infamous he had ever known.

That I did not sue this creature for fees, may be seen from the fact that the judgment, which was for the original bill, all the costs, interest, and a large allowance for my counsel's fee, making a sum more than three times the amount of my bill, still stands recorded against him, I having instructed my attorney to let it alone, as I did not sue for the paltry amount of money involved, but to vindicate professional respectability, and to publicly expose a most consummate villain. The perjury I charge, did not consist of "opposing statements," as the Committee report, for they were never opposed by me, the falsity and the absurdity of this now alumnus' statements being too glaring to require opposition. For example, an oath that I, as consulting physician, agreed to cure his child. This is given as an example of some of the swearing of this now alleged reformed fraud or "humbug." I am ready to produce the evidence before the County Medical Society, or the New York Academy of Medicine, in support of the charge, that the college in question has graduated a perjurer; and if those tribunals decide against me, I will submit to the declaration that my charge in this respect is not sustained. I appeal to those tribunals. As I have never charged the college in question with graduating an abortionist, the second reply of the Alumni Committee is of course directed to a mere inference. It, however, contains so much specious pleading, in mitigation of manifest faults of the college named, that a professional duty compels me to notice it. It is there stated, and no doubt believed by the reporter of the Committee, that the Faculty of said college did not know of the disreputable and criminal antecedents of the pupil in question, till he came up for graduation. Upon this statement, the Committee and the editor of the Record attempted to advance a plea in defence of the college. Now, as I happen to know that this statement lacks the essential, *truth*, the pleas based upon it must fall. The facts are, that nearly a year before this pupil first came up for graduation, a note was addressed to the Faculty of this college and of the Long Island Hospital Medical College, by a physician of this city, whose name and office hours were published in the *Medical Register*, and who has the respectability and the responsibility attaching to members of the New York County Medical Society, and to Fellows of the New York Academy of Medicine, informing those Faculties that it was rumored and believed that this fellow, now alumnus (giving his name), had matriculated in one of these colleges, and stating some of the criminal and immoral points in his history.

That the profession may the better appreciate the difference which exists among medical colleges, in the matter of viewing their obligations to the people and to the profession, I copy the letter which the Long Island College promptly sent to the gentleman who gave them the information above alluded to.

Long Island College Hospital,
April 22d, 1870.

Dr. ——. Dear Sir:—Accept our thanks for your

kind communication, which was duly received. The party you mention has not, so far as we know, made his appearance here. His name is not on our books, and he is not attending lectures.

Yours truly,

—— ——, Registrar.

The college which recently gave him a diploma, though receiving at the same time, unquestionably, a duplicate of the same communication sent to the Long Island College, deigned no reply, and, as the sequel shows, paid no attention to it. It is clearly not true that the means by which Faculties of medical colleges receive information, were not presented to the secretary, at least of this Faculty, many months before this pupil came up for graduation. I leave the profession to judge as to the reasons why the Long Island College did promptly respond, and the college in question did not.

As respects the certificates of character, and the recommendations by letter, which the Faculty lean upon for support of their act, they must think we are truly fatuous, if they suppose the profession will regard them of the slightest weight. All know how easy these documents are to obtain, and how worthless they are. There is no villain so notorious, no criminal so foul, as to be unable to obtain them. Even Rosenzweig and Thomas Lookup could present such certificates.

The very fact that a candidate should need such support ought to be enough to determine any right-minded Faculty to turn him out of the college. And besides, it is not true, as the Committee report, that one of these certificates of character came from a "chief accuser." The author of that certificate had, as I have reason to believe, never preferred charges of criminal or even immoral nature against the said pupil. But I do know that I placed in the hands of one of the Faculty, some considerable time before the first effort to graduate, some of the original pill advertisements of their aspiring pupil, and other documentary evidence of his debased character. The marked disagreement between the statement of the Committee, that on account of the accusations of this *subsequent* certifier, the "candidate had been held in abeyance for a year," and that of the editor of the RECORD, *that he did not graduate at the first effort on account of failure to pass the required examination* I have before observed since this subject has come to the surface.

It is a discrepancy arising, as I have enough reason to believe, from various sources of information among persons dodging the strict line of truth.

One of the Faculty in question insulted me, and dared professional protest, by stating to me that he was not then graduated *because he failed in the examinations.* That, however, may be regarded as a personal matter, but it appears to me my duty to inform the profession all about the history of this now notorious affair. They can then judge for themselves.

As to the matter of the third point of the report of the Committee, the profession are referred to my so-called note of retraction on page 117 of the RECORD for April 15.

The editor has also been led into unfounded statements. For example, on p. 153, RECORD May 1st, he states that a practitioner of this city charged in a letter to the Faculty, that the candidate not only advertised abortion pills, but that he had shown that writer some instruments which were used when the pills failed.

It is then stated that the Committee could not find the author of this letter, and as the candidate, now alumnus, denied the latter part of the statement, it was regarded as worthless. Having myself told the Committee the street and number of the residence of the author whom they are reported as not being able to find, this declaration is clearly without foundation. And as to his declaration's being worthless, even were he not found, I will leave the profession to decide, he being a Fellow of the Academy, and a member of the County Society, against a confessed fraud and a criminal advertiser.

It is quite clear to me, that the Committee did not care to find him, any more than the Faculty alluded to cared for the criminal record of the now alumnus.

I have already shown how totally without foundation is the statement repeated by the editor, that the Faculty were not aware of the character of the individual in question until the very eve of his examination (p. 154). I will now state further, that, more than one year before his graduation, a member of that Faculty took a partisan course and made violent partisan remarks in favor of said candidate, and against those who had, with the best feelings toward the college, and with the most commendable professional motives, communicated the facts, which have been related, to the Faculty. The plea of ignorance cannot be sustained, nor is there a particle of evidence, which I believe will be admitted by the profession, that the "course taken by the Faculty was with the best intentions."

The profession are not prepared, as I believe, to admit that the demand for medical graduates is so urgent that medical colleges are justified in assuming the functions of criminal reform associations, in order to supply that demand. The Faculty in question had more than sufficient reason, nearly two years before this individual graduated, to induce any right-minded college to forbid his attendance. As respects the editorial remark, that the "college in question has for so long a period enjoyed such an enviable reputation," I have only to say, that there are large numbers of the most respectable members of the profession in this city and elsewhere, who well know that this is by no means the first time that the college has graduated advertisers of this kind of "*moral obliquity.*" As an example, I refer the profession to H. D. Grindle, who is well known to have advertised in this style long before, up to the time of, and ever since his graduation. His diploma from this reformatory institution has not worked his reform. The editor is fully sustained in his doubts if *this kind of recognition has ever reclaimed a constitutional sinner.* Under all the aspects of the subject, I do not believe that the profession will agree with the editor that the college exercised the *usual* care, nor that the Faculty were in any way justified in admitting the candidate to an examination, nor even allow him to mingle with honorable medical students; nor that they had any legal or chartered right to take the responsibility of creating a morality and respectability for a person whose history and confessions showed that he had neither. Legally he is now no better off than he was before the receipt of that diploma. The college, however, is debased by it, and the profession is scandalized.

I am not willing to believe, after these statements of the facts, that the profession will agree with the editor in the declaration, that I have been animated in this affair by motives of a personal character, nor that the editor can be sustained in the opinion, that "in a strictly legal sense" my credibility is not greater than that of one who, as he benevolently admits, has been guilty of the misdemeanor of getting money on false pretences, of acts of the most shameful quackery, if not of higher crimes.

While I cannot prevent this Faculty, or any other

medical Faculty, from ignoring information I may give them, or from imputing dishonorable and selfish motives to anything I may say or do, or from defaming me publicly and privately, and decrying my credibility, yet I have an appeal to the profession; and I take it.

STEPHEN ROGERS.

249 West 42d st.

ON RETENTION OF URINE.

TO THE EDITOR OF THE MEDICAL RECORD.

MY DEAR SIR:—My attention was directed through the last number of the RECORD to an article by P. A. O'Connell, M.D., "On the Treatment of Retention of Urine in Impermeable Stricture of the Urethra" (*vide* London *Lancet*, March 2, 1872), in which that gentleman claims originality in the use of an india-rubber tube and ball for the relief of retention—a device which suggested itself to me three years ago (after reading a description of Mr. Clover's apparatus for removing calculus fragments from the bladder), and the utility of which I tested for the first time last summer upon a patient whom I attended with Dr. E. G. Rawson. He was nearly eighty years of age, and suffering from extreme distention of the bladder depending upon stricture and prostatic enlargement. A delicate catheter was with difficulty introduced and the bladder partially relieved, but, owing to the atonic condition of the organ, it was unable to completely evacuate its contents. Whereupon I attached my rubber-tube to the catheter, and, having previously compressed the bulb, allowed it *very slowly and carefully* to expand. In this manner I succeeded in removing an additional pint or more of stale ammoniacal urine, which, in consequence of the feeble condition of the patient, could not have been expelled in any other way. I have since had occasion to satisfy myself that this operation is eminently adapted to cases where over-distention has existed for some time, and especially in advanced life, or in those affected with enlarged prostate, in whom a sort of pouch or permanent reservoir so frequently exists at the "bas-fond." The advantages derived from thoroughly evacuating the bladder before local treatment is instituted in chronic cystitis are obvious. The only point of originality, therefore, to which Dr. O'Connell can hold any claim is in the application of the instrument (as the title of his article indicates) to "impermeable" strictures, by passing a catheter, perforated at its extreme end, down to the stricture and applying suction.

I would not ask to trespass upon your valuable space, were it not to illustrate and make public a more extended application for this simple contrivance.

Yours very truly,

ALEX. W. STEIN, M.D.

NEW YORK, May 19, 1872.

THE AMERICAN MEDICAL ASSOCIATION AND DR. DE MARMON.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—I was much surprised in the reported proceedings of the Amer. Med. Assoc. to find a resolution (at p. 187) of a Dr. Parsons, of New York, seriously affecting the reputation of Dr. de Marmon, a regularly accredited representative of the Westchester Co. Med. Society. At our quarterly meeting in February, in consequence of his rejection by the Committee on Admissions of the New York Academy of Medicine, the Dr. appealed to the Society to know if there was anything against him; there was nothing, as far as we knew. All the Society could do was to offer him a certificate of perfect good standing, signed by the President and Secretary. The action of the Commitee on Admissions of Academy reflects more upon them than upon him, allowing him, as it does, to be stabbed in the back without permitting defence, either by himself or by his friends. The gentlemen who signed his first application were Drs. James R. Wood, Lewis A. Sayre, and Austin Flint, Sen.; his second by Alonzo Clark, A. Flint, Sen., and Isaac Taylor, all gentlemen of the highest position in the profession. With regard to being stricken from the rolls of the Yonkers Medical Association, it was the fate of many of us, who did not think it worth our while to waste our time on that family concern or take any notice of it. A resolution was passed that any member who did not attend consecutively for three months should have his name stricken from the rolls. Many of us concluded to go out by default, including Drs. de Marmon, Edward G. Ludlow (the oldest permanent member of our State Med. Society), myself, Geo. B. Upham, one of our most prominent practitioners, and Dr. Pike, our present Health Officer. With the exception, therefore, of Dr. Jenkins, Dr. Pooley, and Dr. Reinfelder, an old member but only a recent graduate, all the older practitioners of Yonkers repudiate the Association. The attack upon Dr. de Marmon after he had left the Society was as disgraceful as it was unjustifiable on any of the grounds alleged.

Yours very truly,

EDM'D S. F. ARNOLD.

YONKERS, N. Y., May 27, 1872.

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE PACIFIC, AND ITS DIPLOMAS.

A LETTER FROM JAPAN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I have recently met with an instance showing the laxity of our Pacific medical schools in sending forth upon the world incompetent physicians with flaunting diplomas.

I was summoned by our Consul, Hon. C. O. Shepard, at Yokohama, who requested me to examine the papers of a young English physician, which had been sent him from the English Legation, to ascertain their true value, as several physicians had refused to extend to him the courtesies usual in the medical profession.

On examination, I found a large, well-executed diploma, duly signed and sealed, from the "Medical Department of the University of the Pacific," with a matriculation ticket, and a certificate, signed by the Dean of the Faculty, stating that the party had "duly complied with all the regulations of the institution." Turning to these regulations, I found that they were similar to all other like institutions—requiring attendance on two full courses of lectures, etc.

On inquiry, I ascertained that, one year before, this person was a clerk in a drug-store in Yokohama, that he was absent from Yokohama but a few months, and returned a full-fledged M.D.!

Two similar instances are within my knowledge—one of the parties residing at San Diego and the other at Santa Barbara, California. Is there not a remedy for this?

Syphilis and its concomitants constitute the principal part of suffering in Japan. Few cases of deformity, by rachitis or otherwise, exist. The inhabitants live almost in the open air, clothe but lightly, and their diet

is principally fish, seaweed, vegetables, and fruits—a probable cause of this immunity. Vaccination is becoming quite common among the Japanese, thus relieving them, to a great extent, from the terrible scourge of small-pox.

The Japanese are establishing a number of schools and hospitals, for the benefit of their medical students,—though as yet quite primitive,—under charge of European physicians.

The Osaca School and Hospital is in charge of a German physician, who delivers a lecture of two hours on Mondays, Tuesdays, Wednesdays, and Thursdays. The lectures are rendered into Japanese by a native interpreter.

Attached to the college is a dissecting-room, deadhouse, and all necessary appurtenances, as well as a hospital, each of which are quite creditable, in their way.

Japanese physicians were not enabled to make dissections until recently. Now the Government permits them to have the bodies of criminals for the dissecting-room. The "material" is quite abundant, as they frequently decapitate for even petty crimes. Hanging having recently been adopted, in many cases, renders the "material" more valuable.

From their mode of life the Japanese can seldom survive a capital operation—and even succumb from minor ones.

Abortionists are even more abundant in Japan than in New York, for although "chastity is scarce classed among the virtues," especially among the lower classes, an illegitimate offspring is seldom permitted to see the light.

Tattooing the whole body is not infrequent among the lower classes in Japan. It is "done in colors," and in some instances represents persons, faces, scenery, and the like, in a very artistic manner—so much so, that at first sight one is led to believe that they are fantastically clothed. They surpass, perhaps, any other people in this.

The "Inos" or aborigines of the Island of Jesso or Yesso in many instances have a long growth of hair, extending over a great part of their bodies. In some instances the growth resembles the hair on a buffalo robe. They wear long beards and hair. In some instances the beard attains an enormous length. They are peaceful and virtuous, crime and its attendant punishments being scarce known among them.

Some of these items may be of interest to you, and so I jot them down.

Respectfully yours,
R. T. Hayes, M.D.

Osaca, Japan, May, 1872.

THE PHYSICIAN'S BLACK LIST.

To the Editor of the Medical Record.

Some two years since one B. P. Smith (at the suggestion of myself and two other physicans) assumed the control of a publication known as the *Physician's Protective List* (a list of names of delinquent debtors who are able, but who refuse to pay their physican). The duty of the editor of this work (as was well understood at the time) was simply to keep the names of such debtors on the list until he was authorized, by the physician furnishing said names, to remove them. Among the names furnished by myself was that of a party, who threatened the editor with a "suit for libel" unless his name was withdrawn, and an apology rendered. The editor, Mr. Smith, communicated with me about the matter, and I instructed him *under no circumstances whatever to remove the name until authorized by me.*

In the last issue of the book, and since my instructions to the contrary given Mr. Smith, I find the person's name *omitted*, and on the last page of the work an apology made by the editor for having inserted the name in several previous editions. *By this act*, the editor has utterly ignored the original idea of the work and rendered the book of no value whatever to the profession, and I hereby take this occasion to withdraw all my previous endorsements of the said Mr. Smith in connection with this work.

E. Bradley, M.D.

1 W. 24th Street, New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 5, 1872, to May 18, 1872, inclusive.

By S. O., 118, War Dept. A. G. O., May 21, 1872, the following changes are made:—

Simpson, J., Surgeon.—Relieved at Fort McHenry, Md., and assigned to duty as Attending Surgeon and Examiner of Recruits at Baltimore, Md.

Simons, Jas., Surgeon.—Assigned to duty as Medical Director, Dept. of the Gulf.

Page, Chas., Surgeon.—To report to the Commanding General, Dept. of the Platte, for assignment to duty, to take effect June 20th.

The following officers are relieved from duty in the Depts. wherein they are now serving, and ordered to report to the Commanding Generals of the Depts. to which they are transferred, for assignment to duty:—

Hasson, A. B., Surgeon.—From Dept. of the South to Dept. of the East.

Horton, Sam'l. M., Assistant Surgeon; Whitehead, Wm. E., Assistant Surgeon; Buchanan, Wm. F., Assistant Surgeon.—From Dept. of the East to Dept. of Texas.

Coues, Elliott, Assistant Susgeon.—From Dept. of the East to Dept. of Dakota.

Jaquet, G. P., Assistant Surgeon.—From Dept. of the Lakes to Dept. of the Platte.

Brown, H. E., Assistant Surgeon.—From Dept. of the Lakes to Dept. of Dakota.

Jessop, S. S., Assistant Surgeon.—From Dept. of the Lakes to Dept of the Missouri.

Barthole, J. H., Assistant Surgeon.—From Dept. of the South to Dept. of the Lakes.

Wilson, A. D., Assistant Surgeon.—From Dept. of the Platte to Dept. of the East.

Loring, L. Y., Assistant Surgeon.—From Dept. of the Missouri to Dept. of the East.

Notson, Wm. M., Assistant Surgeon.—From Dept. of Texas to Dept. of the Lakes.

De Witt, C., Assistant Surgeon.—From Dept. of California to Dept. of Arizona.

Carvallo, C., Assistant Surgeon.—From Dept. of Texas, and to report in person to the Surgeon-General.

Rose, Geo. S., Assistant Surgeon.—From Dept. of California, and to proceed to Fort Yuma, Cal., reporting thence to the Commanding Officer Dept. of Arizona for assignment to duty.

Gray, C. C., Surgeon.—Granted leave of absence for four months, with permission to go beyond sea.

Edwards, L. A., Surgeon.—By S. O. 124, War Dept., A.G.O., May 29, 1872, granted leave of absence for 30 days with permission to apply for an extension of sixty days.

Baily, J. C., Surgeon.—By S. O. 68, Dept. of California, May 10, 1872, assigned to duty at Benicia Barracks, Cal., the order assigning him to duty at Camp Halleck, Nev., being revoked.

Campbell, Jno., Surgeon.—By S. O. 100, Dept. of the East, May 27, 1872, assigned to duty at Fort Adams, R. I.

Spencer, Wm. C., Surgeon.—By S. O. 124, C. S. War Dept., A. G. O., assigned to duty as Attending Surgeon Headquarters Military Division of the Missouri, and Examiner of Recruits at Chicago, Ill.

Bache, D., Surgeon.—By S. O. 118, War Dept., A. G. O. C. S., granted leave of absence for thirty days.

Forwood, W. H., Assistant Surgeon.—By S. O. 47, Dept. of the Lakes, May 29, 1872, granted leave of absence for 30 days.

Wolverton W. D., Assistant Surgeon.—By S. O. 94, Dept., of Dakota, May 19, 1872, granted leave of absence for 20 days.

Gibson, J. R., Assistant Surgeon.—By S. O. 112, Dept. of the South, May 31, 1872, assigned to duty at Charleston, S. C., relieving Surgeon Hasson.

Bartholf, J. H., Assistant Surgeon.—By S. O. 121, War Dept., A. G. O. May 25, 1872, leave of absence extended 30 days.

Rose, Geo. S., Assistant Surgeon.—By S. O. 82, Military Division of the Pacific, May 15, 1872, to proceed to Washington City, via Panama and New York, in charge of applicants for Soldiers' Home and an insane man, reporting upon arrival to the Adjutant-General.

Powell, R., Assistant Surgeon.—By S. O. 76, C. S., Dept of the Gulf, relieved at Jackson, Miss., and to report for duty at Jackson Barracks, La.

King, J. H. T., Assistant Surgeon.—By S. O. 88, Dept. of the Platte, May 27, 1872, assigned to duty as Post Surgeon at Fort McPherson, Neb.

Elbray, F. W., Assistant Surgeon.—By S. O. 88, C. S., Dept. of the Platte, assigned to duty as Post Surgeon with troops at Beaver City, Utah.

Dickson, J. M., Assistant Surgeon.—By S. O. 79, Dept. of the Platte, May 15, 1872, to report for duty to the officer commanding camp on Red Willow.

Progress of Medical Science.

Chlorate of Potash in Dysentery in the Adult and in Inflammatory Diarrhœa of Infancy, etc., etc.—J. B. Amiss, M.D., Shenandoah Iron Works, Va., writes: "In July, 1867, I was called in consultation to see Mrs. K——, æt. 31, mother of five children, whose health previously had been remarkably good. Her baby, 18 months old, having died a few days ago with inflammatory diarrhœa, I was requested to see her in consultation with the attending physician, and found her very much dispirited—prostrated, her situation extremely critical, constant nausea, excruciating, or, as she termed it, "*fainty*," pain on the whole abdominal surface; evacuations small, frequent, and bloody; often superseded by vomiting. On the third day of my visiting her, a semi-comatose condition supervened, whereupon I applied a large blister to her abdomen, and began the administration of chlo. pot., according to the following:—

℞—Chlo. pot., grs. x.
Pulv. op., grs. v.

To be given every three hours. The nausea increasing, the opium was omitted, and the chlo. pot. given alone in 10-grain doses every three hours. Next day found patient slightly improved. No nausea, no stupor, and to relieve the tenesmus, sprinkled ¼ grain sulph. morph. upon the blistered abdomen at the repetition of each dose of potash, which I changed to four hours. In a few days, the tenesmus relieved entirely, and the chlo. pot. was continued at longer intervals. To hasten her recovery, a variety of adjuvants were employed, but, owing to a peculiarity of our patient, we were forced to abandon every medicine or combination of medicines, as the potash, and the potash alone, would be tolerated by her stomach. The medicine was continued for a month, our patient making a complete recovery, and, as usual with such *intestinal* diseases, has enjoyed *good* health ever since. I have used chlo. pot. in the treatment of inflammatory diarrhœa—entero-colitis—in fact in all of the *dysenteric diseases* of infancy, and regard it the remedy par excellence in such conditions. In typhoid fever, I have for ten years relied exclusively and implicitly upon chlo. pot. As an injection, I know of no remedy of such value in vaginal leucorrhœa; and to relieve the strangury covered by displacements of the uterus, it seldom fails when administered in 10 or 15 doses every 4 hours. Although its benefits in suspected fatty degeneration of the placenta are less marked and equivocal, yet in menorrhagia consequent upon delivery, and dependent upon subinvolution of the uterus, or want of contractile power of the organ, its action is prompt and unmistakable."

Newly Discovered Organic Matter in Diabetic Urine.—Professor Gampani (*Lo Sperimentale*) claims to have discovered in diabetic urine a distinct organic matter which is precipitated by the basic acetate of lead; which has four times the power of glucose to precipitate copper in Fehling's test; but which has no influence upon a ray of light when subjected to polarimetric analysis.

Adulteration of Aniline Colors with Sugar.—M. Joly, of the University of Brussels, has ascertained that red aniline colors, such as fuchsin, rubin, etc., are frequently adulterated with great quantities of sugar, even to the amount of 50 per cent. On treating a sample of the suspected dyestuff with absolute alcohol, or, still better, with a mixture of alcohol and ether, the sugar will be undissolved, and the amount of fraudulent mixture thus shown.

Removal of an Extensive Fatty Tumor.—Dr. H. F. Biggar, of Cleveland, Ohio (*Ohio Med. and Surg. Reporter*), recently removed from the left scapula of a married woman, aged 58, a fatty tumor 15 inches in length, and 19 inches in circumference. It weighed 21 pounds.

Psoas Abscess.—A prompt cure of psoas abscess following a very large dose of iodide of potash is reported by C. du Hadway, M.D., Jerseyville, Ill., in the *Medical Archives*. The patient, male, German, apparently rebellious to all treatment, was put on the iodide of potash, a solution, ʒ ij. to aqua ℥ vj., of which he was to take a tablespoonful three times daily. Not understanding the directions the whole one hundred and twenty grains was taken at one dose, and not only did it do him no harm, but his appetite, which

before was very poor, was immediately restored, and in ten days his abscess was entirely healed (!)

Replanting Teeth.—Out of seven cases of teeth replantation, by G. V. N. Relger, of Belleville, Canada (*Dental Cosmos*), four proved perfect successes.

The First Insensibility from Ether.—John H. Packard, M.D., Philadelphia (*Med. Times*), alludes to the fact that when the vapor of sulphuric ether is inhaled there is, as is well known, an early stage of complete muscular relaxation, in most cases soon succeeded by an excitement, which in turn gives way to the complete unconsciousness which is so desirable for protracted surgical procedures. It is not, however, so generally known that the muscular relaxation is attended with entire anæsthesia. Advantage may be taken of this fact to perform many operations which, although intensely painful, occupy but a moment of time—such as the opening of whitlows or other abscesses. Generally the whole affair may be managed easily as follows: Let the patient lie on a sofa or reclining-chair, and take in his own hand a folded handkerchief or towel, with about f℥ss. of ether poured over it. He should be instructed to breathe out strongly, and then to apply the inhaler at once firmly to his face, and to hold it there. He may be told also to raise up his other hand, and his attention repeatedly directed to keeping it up. As soon as the hands fall, the surgeon, having everything previously in perfect readiness, promptly accomplishes his object, and the patient is at once allowed to "come to."

Combined Action of Chloroform and Morphine.—M. Guibert, in a communication to the French Academy of Sciences, gives the results of two years of observation upon the phenomena resulting from the administration of these two remedies in combination. Two well marked stages have been observed, viz:

1. The subject having first undergone a hypodermic injection of 1 to 2 *centigrammes* of muriate of morphia, the first effect of the inhalation of chloroform by the usual mode is to produce a state of *analgesia*, with preservation of intelligence, the remaining senses, and voluntary movement. This condition is sufficient to blunt sensibility, and is all that it is necessary to produce for ordinary purposes of accouchement and the operations of minor surgery.

2. When the inhalation of chloroform is prolonged for a sufficient length of time without interruption, sleep and muscular relaxation is produced, a condition required in the case of major operations, and termed by Cl. Bernard mixed anæsthæsia.

It is to the state of parturition that this first degree of insensibility is applicable, and in the case of difficult labor it lessens the distress in a very notable manner, and may be continued for several hours without danger to either mother or child during the operation of the remedies; and without lessening, in any observable degree, the uterine contractions, or predisposing the mother to post-partum hemorrhage.—*Gaz. Med. de Paris.*

Absorption through the Skin.—Dr. Chrzonszczewsky details, in the *Wiener Med. Wochenschrift*, some experiments upon animals immersed in medicated solutions, the anus and urethra having first been covered up and, in the case of thick-haired animals, the skin shaved. In a two per cent. solution of muriate of morphia, the animal died in from eighteen to twenty hours; in one per cent. of strychnia, in two and a half to four hours; in one per cent. of nicotine, in one to one and a half hours; in two per cent. of cyanide of potassium, at 2° C., in one half to one third of an hour; the rapidity of death being greater at higher temperatures.

A boy of fifteen years remained six hours in a sitz-bath (65° C.) of infusion of half a pound of digitalis in four buckets of water, the influence on the heart's action being manifested in fourteen hours, at which time the pulse fell from 84 to 60, gastric and cerebral symptoms occurred and lasted two days. In order to test the method of absorption, such experiments as the following were instituted:—Ferro-cyanide of potassium having been injected into the veins of a dog, the animal was placed in a bath containing an iron salt; in three to five hours the veins and capillaries of the skin were stained an intense blue, the cellular tissue remaining colorless.

Strange Course of an Uterine Sound.—Mr. Lawson Tait reports in *The Lancet* two cases in which the uterine sound enters the peritoneal cavity without producing any harm. In one, he is of the opinion that a fistulous opening exists; the other is probably a case of unnatural patency of the Fallopian tubes.

Origin of Pus Corpuscles.—Dr. Duval writing in Mr. Brown-Séquard's *Archiv de Phys.*, contests, by a series of experiments, the theories of Waller and Colnheim. In repeating the experiments upon cornea he found that, in inflammation produced by the action of a point of nitrate of silver, the process did *not* commence at the periphery and extend toward the centre, but the contrary. The corpuscles seen by him were *always* the product of cell proliferation, the *point de départ* being the cornea cells which, instead of remaining stationary, undergo hypertrophy. The result of examining, with high powers, inflammatory changes in the mesentary leads him to affirm that lymph sacs are opened in the very act of withdrawing the membrane from the abdominal cavity, causing a constant flow of lymph corpuscles which naturally arrange themselves into long rows occupying the depressions by the sides of the blood-vessels; simulating an appearance of having escaped from these vessels. He also cites Newmann to prove that during the state of hybernation, leucocytes are nearly absent from the blood, none being visible after prolonged scrutiny; yet when an inflammatory process is once established, plenty of these bodies are found on the exterior of these vessels, having, he thinks, been derived from the corpuscles of the tissues themselves.

Changes in the Spinal Cord Following Division of Nerves.—Mr. Vulpian says, in a paper addressed to the Academy of Sciences of Paris: "After the amputation of a limb the dimensions of the moiety of the cord supplying the limb are considerably lessened in all directions. The posterior cornua and corresponding fasciculus suffer most, and are, in fact, the seat of simple atrophy; but there is no interstitial myelitis nor fatty degeneration. This may happen at all ages, but takes place more rapidly in the young." By experiments upon animals, Mr. Vulpian convinced himself that simple division of nerves, and not the removal of a limb, is the real cause of the medullary atrophy above described.—*The Lancet.*

A Remedy for Sick-Headache.—Grimault & Co., of Paris, make a preparation, called Guarana, from the seeds of a tree native of Brazil and known as *Paullinia sorbilis.* This remedy is said by Dr. Wilks, of Guy's Hospital, London, to be very serviceable in relieving sick-headache. The active principle resembles cafeine and theine, the seeds themselves being used, sometimes, in Brazil as a substitute for cocoa, being prepared in a similar manner.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE GRADUATION OF IMPROPER PERSONS.

In another portion of the Record we publish a card from Dr. Stephen Rogers in reference to his charges against the Medical Department of the University of New York. Our readers are aware that his previous communication upon this point was considered of sufficient importance to attract the attention of the Alumni Association, who appointed committees to investigate the basis of the charges therein contained. Their report has also been published, and to it Dr. Rogers takes exception. In justice to one who has chosen to take upon his own shoulders the responsibility attaching to the said charges, we now present his appeal to the profession at large. Every one must allow him the right to his own opinions of the course taken by the Committee, but whether these opinions are supported by sound argument remains to be seen.

The ostensible object was to prove that the College in question had made a great mistake in graduating a person who, in accordance with the opinion of the majority of the profession, is unfit to practise physic. In so far the desired object has been attained. In our remarks upon the subject we believe we interpreted the views of medical men in regard to the action of the Faculty of that institution, and, after a careful perusal of the "card" in question, we are not in the least inclined to alter our opinion. Our comments were based on the evidence presented to us, and on that alone, and we claim the right to assume that the character of the Record for independence has not in any way been damaged thereby. We are not wedded to any College or clique, but take an especial pride in proving, by our treatment of all questions of an ethical and educational interest to the profession, that independence of thought and action is alone the basis of influential journalism. We permitted the publication of the first letter of Dr. Rogers because the charges were explicit, direct, and, as it appeared to us, actuated by a true spirit of reform. Our sole desire was the truth, and the inference that we had any other motive is simply preposterous. But this is by the way.

The various objections made to the report of the Committee of the Alumni and to our own remarks upon the subject are either based on a difference of opinion concerning evidence, or are devoted to side issues only, in the latter of which the element of "opposing statements" figures in a rather embarrassing light.

To the matter of difference of opinion, the statement in regard to the question of perjury has a direct reference. In a strictly legal sense, when the testimony of both plaintiff and defendant is admitted, the jury alone can decide as to whose statements are entitled to credence. If this were not so, presumptions would take the place of proof, and allegations the place of argument. It is obviously unfair in a moral point of view to put the statements of an honorable gentleman against those of a criminal against the moral law; but strict justice allows for every contingency, and leaves no room for any imaginary standard by which decisions can be rendered. If this were not so, we must never admit as a fact that a man of previous good character can ever be under a false impression, or can ever be in the wrong; or that one of a previously bad character can ever do anything which he may believe to be right. Opposing statements made under different impressions can not unfrequently be reconciled to a mutual understanding of the truth. The mere fact of a case being decided against any given party does not of itself prove a commission of perjury, either actual or intentional. We must be understood as referring to the principle involved as regards the actual testimony of both sides, having no desire to make any comparison of the characters of the two disputants. As to the communications sent to the Faculty concerning the bad character of the student, we have radically opposing statements from Dr. Rogers and the Alumni Committee. As the characters of both of these parties are above suspicion as to veracity, we are at a loss for an opinion based even on the standard offered by Dr. Rogers. It seems to us that these opposing statements can be reconciled by accepting the fact that the note of warning to the Faculty of the University miscarried, and the one to the other College fortunately reached its destination. The profession can hardly indorse the opinion of Dr. Rogers, that certificates of character are useless; neither are they ready to believe that any noted abortionist can obtain recommendations from responsible medical gentlemen. Neither will it appear convincing to the mass of our readers, that because any candidate may need such support he must necessarily be dropped from the matriculation roll.

In regard to the witness that could not be produced,

we have some more "opposing statements" which we are at a loss to explain. It is possibly not so clear to disinterested parties, however, as to Dr. Rogers, "that the Committee did not care to find him (the witness), any more than the Faculty alluded to cared for the criminal record of the new alumnus." This is a gratuitous, uncharitable inference, which will with the profession serve not a little to prejudice a decision upon the general merits of the case.

There are many other matters in the "card" of Dr. Rogers upon which we might in the cause of medical education remark, but they have been for the most part noticed already in the previous discussion of the case in question. Our purpose has been to refer to principles, not men; but there are many incidental matters which come up in such a discussion, especially as to "opposing statements," which obviously cannot be settled in the columns of any journal. They involve questions of such a purely personal character that the committees of our medical societies can alone act understandingly and judiciously in regard to them.

The sympathies of any community are always with one who is not afraid to attack a power if he believes it to be in the wrong, and it was for the purpose of encouraging a manly, outspoken course that we resolved to give Dr. Rogers a chance to be heard. He has undoubtedly accomplished much good in drawing the attention of the profession to a subject of great importance to every one interested in the respectability of our calling; and while we congratulate him on his success in making a good point, we have equal reason to congratulate ourselves on behalf of medical education generally, that with the "best of intentions" on his part he has not succeeded in making out a stronger case against the College in question.

In conclusion, we may add that some of the "opposing statements" may be very satisfactorily explained by the Faculty of the University, from whom, no doubt, the profession would like to hear. If they choose to speak we shall give them the opportunity; otherwise, as all others have been heard, we shall close our columns against any further discussion of the subject.

DR. JOHN WINSLOW'S REPORT OF THE ASSOCIATION MEETING.

We present in the present number the completion of the Report of the Sections of the American Medical Association. No pains have been spared to make it accurate, and we cheerfully give it the requisite amount of space, although in so doing we are compelled to alter our usual arrangement of matter. We feel ourselves warranted in saying that this, with the report of the Association proper, is the fullest one of its kind ever made of a meeting of medical men in this country, and we take a special pleasure in giving the sole credit of its preparation to Dr. John Winslow, a member of our staff.

American Medical Association.

(Report concluded from p. 191.)

SECTION OF SURGERY AND ANATOMY.

DR. J. T. HODGEN, Mo., Chairman; DR. W. F. PECK, Iowa, Secretary.

Second Day, Wednesday, 8th May.

The Section met to-day in a commodious basement-room of Horticultural Hall, and was called to order at three o'clock by the Chairman.

FRACTURES OF THE FEMUR.

DR. P. R. HOY, of Racine, Wis., read a report of *Four Cases of Fracture of the Neck of the Femur*, illustrated by specimens. It brought out a general discussion on the treatment of these and other fractures of the thigh-bone.

DR. SAYRE, of New York, asked whether any one present had seen cases of non-union under the use of Buck's extension, and was answered by several in the affirmative. He thought the treatment by extension and counter-extension was carried altogether too far. Every ounce of force applied beyond that necessary to bring the fragments into exact adjustment was injurious; every ounce short of this was insufficient. To Dr. Swinburne was due the credit of showing that when the adjustment was perfect, the muscles formed the best splint to hold the bones in position. The text-books all said that fractured thighs, in adult subjects, must inevitably be shortened; but even Dr. Hamilton had now recanted, and confessed that union might sometimes be obtained without shortening.

The best treatment of fracture within the capsule was that by the triple inclined plane of Dr. Nelson; the patient's body resting upon the first plane, both his thighs upon the second, and both legs upon the third. This relaxed and quieted the psoas, and made the patient perfectly comfortable. No bandage, coaptation-splint, or sand-bag was required. The hole for the fæcal and urinary discharges must not be too wide—not more than three or three and one-half inches; for the weight of the body must be supported on the tuberosities of the ischium, which Nature had fitted for that office. Then there would be no bed-sores. If the apparatus were strongly made, a pair of stout fellows could take it and the patient on their shoulders, and carry him out under the trees without the least disturbance.

DR. W. H. MUSSEY, of Cincinnati, had once kept a fracture of the neck under extension for six weeks without obtaining union. He then let up the extension, and put a bandage around the trochanters, and union speedily followed. Subsequently he had treated successfully a number of cases by a double inclined plane made of pillows alone—pillows under the limb, pillows at the small of the back, a pillow for the foot to rest on. The only bandage employed was a roller thrown about the limb and the pillows together, to keep them in place. As to the credit of first teaching the treatment of fractures without other splint than that furnished by the muscles themselves, he believed Dr. Dudley was entitled to it.

DR. SAYRE.—I am very glad, in that case, to give the honor to my home—State of Kentucky. An old woman whom I treated in this way recovered so perfectly that her friends insisted that she had never been hurt, and found no end of fault with me for having kept her three months away from her work. She died at last, and I have the specimen. I thought it a splendid

example of bony union, and so thought every member of the N. Y. Pathological Society, where I presented it, and it was so published. But Dr. Geo. K. Smith, of Brooklyn, who has given so much attention to intra-capsular fracture, was present, and asked me if I had boiled the bone. I did that thing the next morning, and found the junction ligamentous and capable of wiggling about to a considerable extent. At the next meeting of the Pathological Society I presented it again, when behold! it was as firm as ever. The ligament was so short that when dry it was just as good as bone.

Dr. Rudolph (?) of S. C. thought non-union rarely or never due to the extension employed. If it were caused by this, the limb should be lengthened, which was never the case. With adhesive-plaster extension, the skin would be torn off before the muscles would yield so as to permit lengthening. Non-union was as frequent under the long splint as under the weight and pulley,—perhaps more so.

Dr. E. M. Moore, of Rochester, said the plan of treatment by extension was as old as Hippocrates, but every now and then it would die out, to be resuscitated after a time. He had watched its recent revival with the greatest interest. It certainly gave better results than the straight splint of Desault; but we had become so anxious to avoid all shortening that we often put on too much weight. In a transverse fracture, if the limb was kept at its full length, the fragments, though at first in contact, would soon become slightly separated by the absorption of the spicula of bone projecting from their ends; and non-union would ensue. He agreed with Dr. Sayre that cases of this kind would multiply under the prevalent treatment. He had once himself kept a man with broken thigh for five months on his back with a weight to his leg. At the end of that time there was no union; and he got him up, rubbed the ends together and applied short coaptation-splints, and, in the pressure of other matters, left him for three weeks with little attention. He got around on chairs, crutches, etc., and did just as he pleased. No pain or inflammation was excited, and when told to go to bed again he exhibited a thigh an inch shorter than its fellow, and with firm union, which had probably taken place almost at once, when the muscles were allowed to press the ends together.

Dr. Rudolph thought that, if a patient were kept five months on his back, there would be time enough for union to occur and be broken up again by malnutrition and absorption. It was doubtless quite as much the improved general condition consequent upon getting the man up, as the pressure of the fragments together by the muscles which caused them at last to unite. Turning a patient out of doors would often succeed in producing such a result when everything else had failed.

Dr. A. C. Post, of New York, replied to Dr. Rudolph that he had once got a lengthening of one-eighth of an inch in a boy about four years old, who had broken his thigh through the shaft and been treated by weight and pulley. The extension was never sufficient to cause discomfort; counter extension simply by raising the foot of the bed. After the patient had walked about some time the limb was no longer than the other. He was very sure of his measurements. Examining and measuring all the compound fractures of the thigh under treatment in the Washington Hospitals, toward the close of the war (where he found Buck's extension giving incomparably the best results), he had discovered one case of slight elongation in an adult. These two were the only cases he had ever seen. That non-union might come from persistent extension was illustrated by its frequency in fractures of the lower end of the humerus, where the patient walked about with his hand in a sling, and the weight of the limb kept the fragments apart.

Dr. Sayre had seen an instance of the last-mentioned fracture where union had occurred with lengthening.

Dr. Berryan, of Pa., had, in a case of fractured thigh in a lad of two years, got one-eighth of an inch lengthening, by accurate measurement; and this was persistent a year later.

Dr. Quimby, of Jersey City, asked if the gentlemen were sure these differences in the length of the limbs did not exist before the fracture. He had a child under observation with one limb one-fourth, or at the least one-eighth inch shorter than its mate, where he could get no history of accident.

Dr. McArthur, of Ill., was skeptical about these close measurements. He had been one of six experts called in a case of alleged malpractice, and no two of the six could agree. The most experienced observer would vary an eighth of an inch in his measurements of the same limb on successive days.

Dr. Gurdon Buck, of New York, gave an extended history of the treatment of fractures of the thigh in the New York Hospital, since 1827, concluding with a statement of the results of the method, adopted in 1860, which bears his name. (This is the plan already referred to, which became so popular during the late war, of extension by adhesive plaster, pulley, and weight, with or without an elastic strap between the adhesive strips and the pulley-cord; counter-extension by raising the foot of the bed.) In the first six years of its use the whole number of cases treated was one hundred and forty-nine. Sixty of these were under fifteen years of age, and gave an average shortening, ascertained by measurement, of something less than one-fourth of an inch. About one-third of the number showed no shortening whatever. In the eighty-nine cases over fifteen years of age, the average shortening was a fraction less than half an inch, and eleven of them were not shortened at all. The same treatment was continued up to the closing of the hospital, but the cases since the year 1866 had not been tabulated.

The speaker claimed for this method that it offered the most efficient means of maintaining uninterrupted extension without discomfort to the patient. It was especially adapted to children, of whom he had sometimes at the hospital half a dozen in a row, as happy as if their thighs were not broken. As to counter-extension, any thing beyond elevating the foot of the bed was soon abandoned in the New York Hospital, except in rare cases. For these it was effected by broad bands of adhesive plaster attached to the trunk and to the head of the bedstead.

In all his experience with the method he had met with but one instance of non-union fairly attributable to over-extension. This was the case of a healthy adult, in one of the suburbs of New York, under the charge of a surgeon thoroughly competent and attentive. After continuous extension for nine or ten weeks the bone was not united, and the patient was brought to St. Luke's Hospital. Dr. B. then learned that during the whole time a weight of more than twenty pounds had been employed. The case proved obstinate. First, the adhesions were thoroughly broken up, the ends of the fragments rubbed together, and the limb replaced in the extended position with a weight of five or six pounds attached, just sufficient to steady it. This failed. Next a drill was introduced through a valvular incision in the soft parts; the ends of the bone were perforated in several places; and the limb was put up in plaster. This also failed. At last gimlets were introduced and allowed to remain for some time, and union, of course

with shortening, was effected. The case suggested a rule which he had since followed, not to maintain a heavy weight, with the hope of securing an unshortened limb, beyond the first fortnight. At the end of that time, though the limb might still be short, the weight should be made only moderate.

It must be borne in mind that in fractures of the femur we were not to expect union without shortening as an invariable rule. If any surgeon claimed to obtain it in every case, he could only reply that it was not his own experience; and he had perhaps bestowed as much time and pains as any one upon the treatment of this particular fracture. The amount of shortening might be regarded as in some degree a measure of the violence of the fracturing force. If it were considerable, that force must have been sufficient not only to break the bone, but to displace its ends so much as to leave the fragments at the mercy of the muscles, which would draw them past each other. In that case a greater extending power was necessarily required, but it was not prudent to carry it too far with the expectation of completely overcoming the muscular resistance.

Dr. Sayre said that his preceptor, Dr. David Green, had taught him the use of adhesive plaster and rubber bands for extension in 1846.

Dr. Buck claimed no originality for the idea. His House-Surgeon, Dr. F. D. Lente, had first called his attention to the plan of employing adhesive plaster, as described in the New York Journal of that day, where it was credited to Prof. Crosby. It afforded him no little satisfaction, however, to have done something to popularize the method, which he had been enabled to do by his position in a public institution, and by the hearty co-operation of his colleagues. He felt that it had been instrumental in preventing a great amount of suffering incident to almost every other mode of treatment. Only recently he had been called to a case in the country where a woman had been enduring torture for a week, with her limb upon a double inclined plane. Her delight, when the weight and pulley made her perfectly comfortable, was something to rejoice in.

Dr. Gregory, of Mo., thought that elongation of the limb in young subjects, where the fracture was in the lower third of the femur, might be readily explained by increased growth of the epiphysis from fluxion to the part. It was noticeable that in both the cases of lengthening reported, union had occurred; and he was doubtful whether non-union was ever justly chargeable to over-extension. We were all aware that it might be due to many other causes, some of them obscure. The obstinacy of Dr. Buck's case would seem to imply that there was some other influence at work to prevent repair than the twenty pounds' extension.

Dr. E. M. Moore said it so happened that the only case of non-union he had seen was one in which there was two inches' shortening, and in which the extension must therefore have been very inadequate. After three months it finally yielded to Malgaigne's spike. Every one in amputating the thigh must have noticed that, after the bone was sawn through, it still hung by the ligamentous tissue along the linea aspera. In the majority of cases of oblique fracture, this tissue was probably not broken across; and to make lengthening possible, it must be either ruptured or stretched. Possibly a steady strain upon it might do the latter. Some gentlemen had smiled at the mention of twenty pounds' extension. He knew a gentleman, vain of his handsome legs, who had borne fifty pounds (weighed and not guessed at), without great discomfort, for three weeks, at the end of which time the shortening was reduced to half an inch. The patient himself called for "more weight, more weight," as he watched the tape lengthening day by day.

SUSPENSION-APPARATUS.

Dr. J. H. Packard, of Philadelphia, exhibited a suspension-apparatus for fractures of the leg. It was simply a light frame of iron, shaped to receive a fracture-box, and suspended at the four corners by two cords, one for each end, the centres of these cords being connected by a third one running over a hook which was hung by a rope from a fixed support above. The Doctor remarked that the hook was better than a pulley, since the slight friction of the cord over it gave the patient a comfortable feeling of steadiness in the support, while it did not interfere with his moving the limb at will. For the fixed point of suspension a staple in the ceiling was convenient, in the poorer class of houses with low-ceiled rooms; but a high ceiling would not serve, as it allowed too much swing. Perfectly free play for the limb, but within a narrow range, was the thing to be secured.

The idea was often entertained that, in order to make use of suspension, we must give up the tried and familiar splints and dressings, and resort to something new and complicated. This, however, was quite unnecessary. For his own part, the speaker was fond of the fracture-box, and he had contrived the present apparatus to meet the case of a patient who had his leg in such a box, and yet required free movement in bed. In connection with the fracture-box, he was in that case employing pasteboard splints and adhesive plaster extension. The same mode of suspension would serve as well, without the fracture box, for pasteboard splints, or for any form of the "immovable" dressing, such as starch, plaster, or silicate of potash. For this purpose it would only be necessary to give the frame an additional bar or two, and place in it a paper trough.

SPLINT FOR EXCISION OF KNEE.

Dr. Packard also presented a splint for use after excision of the knee-joint, or in cases of compound fracture of the limb. It consisted of a straight board, some five inches wide and a little longer than the limb, beveled and curved at one extremity to fit the buttock, while to its other end an iron hoop was fixed at a slightly obtuse angle, rising high enough to clear the toes, and serving to protect these from the bed-clothes as well as for the attachment of bandages. Opposite the wound a piece of the board, its whole breadth and of the proper length, was cut out, and either hinged and buttoned to its place again, or better, made to slide in with tongues and grooves. The portions of the splint above and below this trap-door were united and held firmly in line by an iron bar on either side, bent upwards into a hoop so as to support the bed-clothes. With the proper pads and bandages the splint was complete. The trap-door gave free access to the wound for dressing, and supported it at other times.

TWENTY-SEVEN STONES IN THE BLADDER.—POLYPI OF THE PROSTATE.

Dr. W. H. Mussey, of Cincinnati, read a paper entitled *A Case of Vesical Calculi and Polypi of the Prostate*, exhibiting the specimens and photographs.

A gentleman, fifty-six years of age, was first seized with stoppage of urine in 1865. Fond of being his own surgeon, he resorted to a silver catheter, which he continued to use, with the occasional advice of a physician, for four years. In 1869 he had a violent attack of cystitis, and called in a physician, who so far relieved him that for two or three weeks he could pass water without the catheter. About this time he began to

discharge small, white, round calculi by the hundred. For the next three years he tried every mode of treatment to dissolve the stones, which he could find described in the old text-books at his command, or in the medical "light literature" of the day.

Finally he came into the speaker's hands, who operated upon him, by the bilateral method, on the 30th of March last. After making the incision and seizing a stone, the doctor found some trouble in extracting it, and discovered on examination a band stretched across the prostate, under which he could pass his finger to the length of the nail. This he ruptured, and the stone then came away with ease. There had been considerable difficulty in first seizing it, however, and its shape indicated that it had been firmly impacted in a bed of calculi. These proved to form a complete pavement over the posterior part of the fundus of the bladder. Twenty-seven perfectly formed stones were removed, besides a considerable amount of débris. The largest weighed 340 grains, the smallest 4 grains, and the whole 6 ounces 2 scruples.

In the course of the examination several prominences were discovered on the prostate, and were removed by the fingers and the forceps. There were a dozen or more of these polypi, from the size of a buckshot to that of a filbert, besides some which were washed away and lost. Microscopic examination showed them to be of similar structure with the prostate itself. In all his father's experience of lithotomy, and his own, which now embraced nearly as many cases, the Doctor had never before met with this complication.

The patient made an excellent recovery. The wound was kept open, and suppuration of the mucous membrane of the bladder allowed to go on for some time, to change its faulty condition. It was frequently washed out with a solution of benzoin, two drachms of the gum to a pint of water. The catheter was kept in for a considerable period; but the patient was now able to urinate naturally without it.

Dr. Russell, of Ohio, had once, in removing a stone by the lateral operation, brought out with the forceps a spherical fleshy mass, as large as the first joint of the forefinger, which he supposed to be the prostate gland itself (!). He thought it might very possibly have been seized by the forceps, not within the bladder, but in the cut, which was through the prostate.

Dr. Mussey was sure that the polypi in his case had not come from the cut. It was doubtless one of these growths which had first caused the retention of urine. The band discovered crossing the opening was probably due to a false passage which the patient had made with the catheter. He confessed that he had once hurt himself in passing it.

Dr. Moore, of Rochester, thought the band might possibly have been a morbid growth from the prostate body, like the tumors removed. The transcendental anatomists had shown that this body was liable, like the uterus, to the development of fibrous tumors.

CANCER CURED BY ELECTROLYSIS.

Dr. Mussey read also a paper on *Electrolysis in Cancer*, illustrated by photographs and a wax model. He had been led, by the success of Dr. Neftel, of New York, to try the electrolytic treatment upon several cases of cancer; and though he could not claim uniformly successful results, still he had become convinced that much could be done with this treatment, if the cases were judiciously selected, and the agency employed properly appreciated and carefully applied. [Scirrhus seemed to yield the most readily, and encephaloid to be the most intractable. As to batteries, he had found one of Remak's, made in Berlin, give the steadiest current; but it was inferior in most respects to a Stöhrer battery made by Curt W. Meyer, of New York. Drescher's had proved less steady, and more troublesome to keep in repair.]

Great patience and perseverance were required in all these cases, on the part of both operator and patient; and most of his patients had given out before he had effected what he deemed possible for them. One, however, a woman of infinite pluck and endurance, had satisfied him that a malignant tumor could be cured by electrolysis; and others now under treatment confirmed this view.

The woman referred to was thirty-six years old, in good general health. She had been suffering from a painful tumor on the back of the hand for about a year prior to the spring of 1870, when she consulted Dr. Mussey. The tumor had continued to increase, under various modes of treatment, and amputation of the hand had been proposed. On examining the tumor Dr. Mussey found it 2¼ inches long by 1¾ wide, and elevated from ¼ to ¾ inch above the surrounding surface. The whole hand was greatly swollen. The diagnosis of encephaloid cancer was made, and its removal at once determined upon.

An incision was made over the centre of the tumor, in the line of the middle metacarpal bone. The skin was dissected up, and the extensor tendon of the middle finger sacrificed, but the other tendons were saved. On opening the sheath of the tumor it was found highly vascular, and hemorrhage was profuse. A mass of encephaloid was removed. The middle metacarpal bone had wholly disappeared, and its adjacent metacarpals were involved, so that at least half their substance had to be scraped away. The wound was thoroughly cauterized with pure carbolic acid, and packed with lint. It was dressed afterwards with a carbolic acid solution, ten grains to the ounce of water.

Soon encephaloid granulations began to spring up luxuriantly, and the Doctor decided to try electrolysis. He at first used three needles attached to the negative pole of the battery, the positive electrode being placed in the palm of the hand. The current of six cups was passed for five minutes, that of eight cups for two minutes, and that of ten cups for three minutes. The next day the growth was larger than before, and he applied a flat rectangular electrode 1½ by ½ inch, covered with a single thickness of moist lint, upon the mass, and passed the current from — cups for fifteen minutes. This was kept up daily for four days, when the electrode was brightened and used naked, and the application continued daily for a week longer. Then a circular electrode about ⅝ inch in diameter was employed, being pressed into the mass. Each time the tumor would shrink a little, but the next day it would be as large as ever, and after a week it had actually gained in size. The woman was willing to endure anything to save her hand, and the Doctor, in no wise discouraged, now took a smaller electrode, ¾ by $\frac{1}{16}$ inch, and thrust and bored it into the mass as deeply as he could, and then applied the whole power of sixteen cups for twenty-five minutes. This produced a great frothing from the evolution of gas, and the tumor began to shrink more after each operation, so that at the end of a week it was perceptibly diminished. In a week more of these daily applications the diminution was so great that he gave a favorable prognosis. From the first of May until July the applications were made every other day. At the latter date the wound was cicatrized, and the patient was required to call only twice a week. In August she was using the hand to sew, and wearing the thimble upon the middle finger. This fatigued the arm a good deal, but the fatigue was relieved by elec-

tricity. She continued to call once or twice a week until Nov. 15th, 1870, when the treatment was stopped. It was now twenty-two months since the cicatrization of the wound, and sixteen months since the last application of treatment, and the disease showed no sign of return.

Dr. Bronson, of Mass., wished to know whether the tumor was examined microscopically, and was informed that it had not been. At the time of its removal there was no thought of electrolytic treatment, and it had been lost. Dr. Mussey, however, had not the slightest doubt about his diagnosis. Dr. Bronson remarked that he deemed constitutional treatment of the greatest importance in cancer, and no mention had been made of it in Dr. Mussey's report.

Both of Dr. Mussey's papers were referred to the Committee on Publication.

APPARATUS FOR FRACTURE OF CLAVICLE.

Dr. Edward Warren, of Baltimore, presented a new splint for fracture of the clavicle. It was a frame of wire properly padded, and, though continuous, was described in two parts—a "thoracic portion," fitting the side of the trunk from the crest of the ilium to the axillary space, and a "brachial portion," adapted to the inside of the arm as far as the elbow. The vertical wires of the first portion were bent outwards at the axilla to form the second. The cross wires in either portion were curved in adaptation to the surface they embraced. The thoracic portion was fixed by straps about the body, one of which crossed, and pressed upon, the lower end of the scapula of the affected side; the brachial portion was fixed by straps around the arm. Besides these, a strap passed from the front of the axillary bend nearly vertically over the shoulder, across the back, and under and over the sound shoulder, as in a "figure-8," to be buckled to a second strap which passed to meet it from the back of the axillary bend, toward the top of the sound shoulder. This completed the apparatus. The frame, while firm enough to resist the ordinary strain upon it, could still be bent by the surgeon so as to fit different patients, and the axillary bend could similarly be given such an angle as to maintain the arm in any position desired, from the pendent to the horizontal.

The speaker claimed for this apparatus that it was simple, readily applied, and not readily disarranged; that it kept the fragments perfectly in position, in the same line and on the same plane; and that it was worn with perfect comfort, and left the patient's forearm free for writing, feeding himself, etc., during the whole treatment. It was so close-fitting and compact that under a loose coat its presence would not be noticed. It cost but about six dollars to make, and one would serve for almost any case. He had tried it in a number of instances with complete success, and had been able to demonstrate its efficacy, by presenting a patient under treatment, at the last meeting of the Maryland State Society. Other surgeons had also employed it with equal satisfaction.

The apparatus could be advantageously used also for dislocations of the clavicle, and was especially well adapted to those of its outer end, which there was commonly so much difficulty in keeping in place. The speaker had used it in a dislocation of the sternal end. It was suited also to fractures of the acromion, of the coracoid, of the neck of the scapula, or of the surgical neck of the humerus; and it might readily serve for the very fracture alluded to this afternoon, in which non-union was so frequent, that of the humerus just above the elbow. In humeral fractures it was necessary to have the forearm supported. For this purpose a sling was exhibited, also made of wire, and capable of being firmly attached at one end to the brachial portion of the frame above described, by two long pins sliding into sockets, while the other end was hung by the usual strap about the neck. The Doctor had used the apparatus with this attachment in a fracture of the surgical neck of the humerus with great advantage. It had worked admirably, too, in a case of fracture of the middle third, just below the insertion of the deltoid and the coraco-brachialis. Here, from the tendency of these muscles to elevate the upper fragment, it was necessary to fix the arm horizontally; and this the apparatus accomplished without fatiguing the patient.

Dr. Quimby, of Jersey City, had some years ago, in a paper before the N. Y. Academy of Medicine, advocated the treatment of clavicular fracture by adhesive straps. He thought that plan superior to the one just presented in its greater simplicity and its greater firmness of support. The wire would certainly yield a little; adhesive plaster, properly applied, would not.

PROFESSOR MOORE'S "ELBOW FIGURE-8."

Dr. E. M. Moore, of Rochester, N. Y., was much pleased with the apparatus exhibited. He had at first thought it was going to be only another modification of the old axillary pad and figure-8 bandage; but closer inspection had satisfied him that it discarded both these ideas, and, in so doing, agreed with what he had long recognized as an essential principle in the treatment of clavicular fracture. He inclined to think it would work far better than the Desault or the Fox dressing.

As the result of a good deal of thought and experiment, Dr. M. had, as he believed, discovered wherein lay the radical error of the almost universally adopted axillary pad and figure-8 bandage. At the same time he had developed the fundamental principle of treatment, and devised a means of carrying it out. This principle, as he had said at the meeting of the New York State Society in 1870, was to antagonize those fibres of the sterno-cleido-mastoid attached to the upper border of the inner fragment of the clavicle, by the fibres of the great pectoral attached to its lower border. When the bone was broken, as usually, in its middle third, and the shoulder, in obedience to gravity and muscular action, fell into the classic position downward, forward and inward, the inner fragment, as every one knew, would almost invariably ride the outer. But we might lift the shoulder as high as we pleased, the inner fragment would still keep uppermost, owing to the action of the cleido-mastoid, unless we were careful to make tense the clavicular portion of the great pectoral. The axillary pad and the figure-8 bandage, each in its own way, prevented this, as would be seen by a glance at the mode of insertion of the muscle.

By the twist in its fibres, those taking origin from the thorax were inserted high up on the lip of the bicipital groove, while those from the clavicle were inserted fully an inch and a half lower down. Now the thick upper edge of the wedge-shaped axillary pad came just opposite the insertion of the clavicular fibres. When the humerus was used as a lever to throw the shoulder outward, on the pad as a fulcrum, the motion at this point would of course be *nil*, and the only fibres of the pectoral put on the stretch would be the thoracic ones inserted higher up. These would simply limit the outward motion of the upper end of the humerus. The axillary pad, then, even if it could be relied upon to meet the indication of drawing the acromial fragment outward, would have no effect to prevent the sternal one from over-riding.

The figure-8 bandage was still worse. As it was

drawn tightly across the borders of the axilla it would bend them, and so practically shorten them and pull the humerus inwards. But the anterior border being formed wholly by the thoracic fibres of the great pectoral, these alone would be made tense by the bending, while the clavicular fibres, just escaping the pressure of the bandage, would be absolutely relaxed by the indrawing of the bone.

How, then, should all the indications be met—the three classic ones, to carry the shoulder upwards, outwards, and backwards, and the fourth, most important of all, to put the clavicular fibres of the pectoral on the stretch? The way to do it was so simple that the wonder was every fool had not thought of it years ago. Throw the elbow back from the shoulder-joint as a fulcrum, and the clavicular fibres of the pectoral, inserted lower and therefore moving through the arc of larger circle, would, of course, be made tense before the motion was arrested by tension of the thoracic fibres. This same movement would tend also to carry the scapula back upon the chest toward the spine. But the scapula, as it approached the spine, found the ribs more salient and was pushed backward, taking with it the acromial fragment of the clavicle and thus drawing it obliquely backwards and outwards in the direction of its length. The only remaining indication, to raise the shoulder, was also thus partially fulfilled, for the scapula, as it was pushed back, tended also to rise; but this might be supplemented by a lift from the elbow.

It was easy enough to put things in place, but the rub came when you tried to keep them there. The supine posture would do it, as long known, but that was simply impracticable. The retentive apparatus should be something obtainable anywhere and capable of the readiest application. After many trials the speaker had finally arrived, as he thought, at the extreme of simplicity. All he wanted was a cravat eight inches wide and two yards and a half long. Half a broad sheet, folded cravat-wise, served the purpose very well. Laying this by its centre across his palm, letting the ends hang to the floor, he with this hand seized the patient's elbow on the affected side, and carried the end of the cravat falling next the patient's body up in front of the shoulder of the same side, across the back, and under the sound axilla. The other end was thrown inwards over the patient's forearm, carried thence across the back, and over the sound shoulder, to meet and be tied to the first end. The two extremities of the bandage thus formed one-half of a figure-8 around the sound shoulder, while its middle portion formed the other half of the figure around the forearm and elbow. Hence he had styled this *the elbow figure*-8." The borders of the affected axilla were not pressed upon, and that side was made perfectly comfortable; but the patient would sometimes complain of galling on the sound side. To complete the dressing, the three or four inches in width of the cravat left loosely embracing the back of the elbow should be smoothly pinned over; and the hand should be slung up by a strip of bandage pinned to the inner edge of the cravat on the affected shoulder, where it overlies the sternal fragment.

Dr. Warren's paper was referred to the Committee on Publication, and the Section adjourned.

Third day, Thursday, 9th May.

The Section was called to order by the Chairman, at three o'clock.

RESECTION OF HIP-JOINT.

Dr. W. F. Peck, of Iowa, read the history of a case of *Removal of the Upper Portion of the Left Femur for Disease of the Hip-Joint* in a boy six years old. It was illustrated by specimens and drawings. [Our further notes of this case are unfortunately lost.—J. W.] The paper was referred to the Committee on Publication.

THE SOFT PALATE.

Dr. Harrison Allen, of Philadelphia, read a paper, illustrated by drawings, on *The Soft Palate in Health and Disease.*

After some remarks upon the importance of the subject and the insufficient attention it had received, he stated that he should discuss it under the following heads: 1. The soft palate as seen from the oro-pharynx. 2. The soft palate from the naso-pharynx. 3. The relation existing between the mechanism of the soft palate and its blood-vessels. 4. The nomenclature of parts associated with the soft palate.

He announced the modern views of the mechanism of the soft palate, and next considered the relations of the palato-glossal fold to the tonsil, stating that in tonsillitis it was widened and appeared as if spread out over the gland. Immediately to its outer side a whitish tract continuous with the pale mucous membrane of the floor of the mouth was discernible. The distribution of the blood-vessels in this groove indicated, it was thought, nutritive connections with the tongue and floor of the mouth. The condition of the palato-glossal fold should always be studied in tonsillitis, more particularly in periadenitic changes. This consequence of inflammation of gland tissue had not received, in the case of the tonsil, the attention it deserved. The speaker invited notice to the mucous membrane covering the anterior edge of the coronoid process, as it appears when the lower jaw is depressed. This tract he denominated for convenience in description the *pre-coronoid space.* Its nutritive relations were with the soft palate rather than with the lower jaw or the cheek. Inflammation of the cheek tissues was not apt to extend upon it, while inflammatory action about the lower wisdom tooth (as dentists assured us) was readily transmitted to it, thence to involve the soft palate. Conversely, ulcerations of the soft palate might tend to involve the parts about the wisdom tooth of the lower jaw. Attention was next directed to the importance of the palato-pharyngeal fold. This fold determined the site of pharyngeal irritation. Immediately to the median side of each fold a corrugation of the pharyngeal mucous membrane was met with in pharyngitis, more particularly in syphilitic angina. The study of these folds was important, since they were frequently the seat of ulceration.

The naso-pharynx was a cavity of less interest than the oro-pharynx. Direct lesion of the parts was seldom seen in connection with troubles of the soft palate. Ulceration was rarely found excepting that of syphilitic origin which was common. Gummy tumors were also rare.

The vessels as they appear upon the soft palate were next described, and the proposition stated that the position of some of these vessels being ascertained, the points of traction during the elevation of the soft palate could be determined. It was also demonstrated by cases that ulcerations of the soft palate have their shape and position assigned by the arrangement of the blood-vessels.

The Doctor ventured to make some suggestions upon the terminology of the parts associated with the soft palate. He would discard entirely the term "arch" as applied to its inferior tractors, and would use "fold," saying *palato-glossal* and *palato-pharyngeal fold* of either side. The transverse space between the palato-glossal

folds was the *oro-pharyngeal orifice* (Luschka); that between the palato-pharyngeal folds the *naso-pharyngeal orifice* (Ibid.). The space between these orifices following the curve of the pharyngeal wall was the *tonsil'ar space*. The space between the two tonsils was the *inter-tonsil'ar space*. The term "fauces" was rejected as being too vague.

The paper was referred to the Committee on Publication.

MODIFICATION OF STARCH-BANDAGE.

Dr. Charles N. Hewitt, of Redwing, Minn., read a paper entitled *Principles involved in the Treatment of Fractures by the Starch-Bandage, with a Modification of the Dressing.*

The array of "principles" was a long one. Among the practical points were these: In any dressing, the inflexible splint should be placed upon the extensor, rather than the flexor surface of a limb, so as to be nearer the bone and to avoid pressure in the great vessels and nerves. A dressing, to be generally applicable, must be made of materials that can be found everywhere and can be manipulated with little skill. It must be such that it can be applied once for all by the surgeon; therefore it must accommodate itself to the varying size of the limb, with such aid only as may be rendered by unskilled attendants. It must not confine the patient to his bed or to the house.

The dangers shared by the ordinary starch bandage with the other forms of "the movable" dressing were mentioned, and the speaker then described his own modification. It consisted in starching only the overlapping ends of the many-tailed bandage employed, the central portion, applied to the flexor surface of the limb being left free from stiffening. The unstarched part of the muslin would stretch if the limb swelled; and when the swelling went down, and the bandage became loose, a roller thrown around would mould it again to the limb, the unstiffened part falling into wrinkles or folds.

In illustration of his method, the Doctor related four cases which had prospered under it—one of fracture of both leg-bones; one of severe contusion and fracture just above the ankle-joint; one of simple fracture of the thigh, where the patient was on crutches the eighth day; and one of compound fracture close above the knee.

Dr. Garrish, of New York, had his own method of using starch. Nothing else could equal it, especially for children.

A PAPER DRESSING.

Dr. Keller, of Ky., recited a remarkable case which had come under his care a year ago. A boy eight years old fell seventy feet, but the fall was broken by the railing of a staircase, so that he was not killed outright. The Doctor saw him almost immediately, and found the right radius and ulna with a multiple fracture extending from within an inch of the wrist to within the same distance of the elbow; the right humerus broken near the elbow and again near the shoulder; the right femur broken in its lower third; the right tibia and fibula badly comminuted, the fracture of the former involving the ankle-joint; four or five ribs broken; and (we believe) some other breaks, besides the bruises.

Of course the first business was to resuscitate the child and quiet his pain. He was placed in the most comfortable position, and kept under anæsthetics and opiates. The limbs were left exposed to the air, and cold-water applications alone were employed for sixty-five or seventy hours. Then a fixed starch dressing was applied, made not of muslin but of paper. First the limbs were enveloped in cotton wadding, over which was drawn, for the lower extremity, the leg of a pair of knit drawers, and for the upper the sleeve of an undershirt. Then slips of Manilla paper were cut, from half an inch to an inch wide, and long enough to encircle the limb and overlap at the ends. These were covered with starch on both sides, and applied in the usual manner over the wadding and knit stuff. Four or five courses were laid on, beginning each time at the fingers and toes. To keep the radius and ulna apart, the forearm was held semi-prone and the paper pressed in between the bones, so that when dry it formed a perfectly moulded splint for the purpose. The lower limbs, after dressing, were placed on a triple inclined plane.

About the end of the fourth week the dressing was removed, and the boy presented to his parents as sound as before he was hurt, with perfect motion of both the injured limbs. Though union seemed everywhere complete, yet the starched paper was reapplied as a matter of safety. At the expiration of seven weeks it was taken off for good. The broken lower extremity was then found, on repeated trials, to measure one-fourth inch longer than its fellow. The Doctor had attributed this not to actual elongation of the injured limb, but to wasting of the sound one, from its long disuse; for, owing to the rib-fractures on the left side, and the pain caused by any movement of that limb, it had got less exercise than the one done up in starch.

The speaker had referred to this case to attest his confidence in the immovable starch apparatus, and also to show the superiority of that form of it here employed. He thought paper surpassed muslin as much as the common starch bandage did every other kind of splint. Nothing else, he believed, would have secured perfect motion in that ankle-joint.

Dr. A. C. Post, of New York, had had considerable experience with the starch bandage, and thought surgeons were too apt to lose sight of the dangers attending its application very soon after the injury. In the New York Hospital he had seen two broken legs mortify from this cause, necessitating amputation. In one case under his own charge the circulation was so much obstructed that he had to relieve it by slitting down the bandage. Effects like these had led him to suspend the application of the immovable dressing until the traumatic inflammation had subsided, and to use, for the first week or two, carved splints or the fracture-box.

Dr. Quimby, of Jersey City, had seen it necessary to remove the bandage to prevent gangrene. Buck's extension was safer for the general profession, but this, like other niceties, should be left to experts.

Dr. Keller said that with the paper dressing it was easier than with the cloth to make little trap-doors, whether for ventilation or to see what was going on inside. He would not apply any immovable apparatus until inflammation had subsided.

Dr. Kinloch, of South Carolina, thought the chief advantage of the immovable dressing was that it could be applied so speedily as to free the patient at once from restraint. Only one agent, by its rapid hardening, met the indications perfectly, and that was plaster-of-Paris; when we had this at hand, it was foolish to wait thirty-six hours or longer for starch to dry. The dressing was applicable even to limbs considerably shortened, since they could be brought to their length under chloroform, and held so until the plaster set. The Doctor then explained in detail the mode of application, which has already been laid fully before our readers. (See Record, vol. vi., p. 313, September 15, 1871).

Dr. Newman, of New York, was strongly impressed with the importance of the last speaker's remarks. He thought the dressing was sometimes unjustly blamed for gangrene incidental to the injury.

Dr. Quimby reiterated his cautions against a dressing that would shut the limb from sight. He had seen bad results from the plaster splint in two instances where it had been well applied by men of skill.

Dr. Hewitt's paper was referred to the Committee on Publication.

GEORGE THOMAS—A CURIOUS CASE.

Dr. S. B. Merkel, of Philadelphia, introduced to the section George Thomas, a colored man who could play such queer tricks with his heart and his belly that Profs. Pancoast and Gross had found this case worthy of examination, and the latter had hinted that he was probably in league with the Devil. He was born in Brazil and raised in London; had spent some time in Germany and at Paris, where, as at London, he had attracted scientific attention; and he had now taken up his abode at Frederick City, Md. He claimed that he could stop his heart, "throw" it into different parts of the abdomen, and "roll" the latter about the navel. The last peculiarity had been discovered by his mother when he was six months old. He got his living by exhibiting himself, and seemed anxious for a while about his pay; but, satisfied at length that the hat would not be empty, he lifted the curtain and opened the show.

First he made the abdominal wall undulate by a peristaltoid movement of the recti from above downward, there being about one and a half, or possibly two and a half, waves visible at once. The motion became very rapid, and was kept up for a minute or more. (He said he could do it all day.) Then he reversed the action, sending the undulations from below upward; and thus he alternated several times. Next he "threw his heart" into the belly, and a swelling like a phantom tumor appeared above the crest of the right or the left ilium at will. Finally he "stopped his heart," until several observers said they could neither hear nor feel it.

Voted that a committee be appointed to retire and examine the case, and report to the Section before its adjournment. The Chair appointed Drs. E. M. Moore, Moses, Allen, Quimby, and McDowell.

DR. HOY'S PAPER—TONSILLOTOMES.

The paper on *Four Cases of Fractures of the Femur*, presented yesterday by Dr. P. R. Hoy, of Wisconsin, having been revised by the author, was now reread by the Secretary for action by the Section. A vote of thanks was passed.

Dr. Hoy presented a tonsillotome of his own invention, which he had used for many years. It was a pair of strong scissors having both blades curved edgewise, like curved bistouries or the concave blade of a costotome.

Dr. McClellan, of Tennessee, showed Dr. S. D. Gross's écraseur for the tonsil.

COMPOUND DISLOCATION OF ANKLE-JOINT.

Dr. Bronson, of Mass., related a recent case in his practice, of compound dislocation of the tibia from the astragalus, together with compound comminuted fracture of the fibula, in a lad fourteen years old, thrown from his horse. The wound was washed out, a number of detached fragments of the fibula were removed, the dislocation was reduced, and adhesive straps and cold-water dressings were applied. The patient was suffering severely from shock, and it was several hours before reaction could be established. The case progressed well, and the boy recovered with perfect motion of the joint. He was fed well from the date of the accident to the end of treatment, and was stimulated for a numbers of days. The Doctor believed that to this, more than to anything else, the favorable result was due. He had known several such cases die in the Massachusetts General Hospital within the last four or five years; and he believed it conceded that they had erred in not sustaining the patients sufficiently during the first fortnight.

NÆVUS—GUNSHOT WOUNDS.

Dr. Garrish, of New York related a case of nævus maternus over the anterior fontanelle. It was noteworthy only from its situation, and was cured by vaccination at the fourth month, when it had grown from the size of a pea at first, to that of a walnut.

Dr. Waterman, of Indiana, reported two cases of shell or solid shot wound of the thigh. Both were flesh wounds, and in no wise remarkable.

CANCER—THE POWER OF ARSENIC.

Dr. Walker, of Ill., related a case of mammary cancer. An American lady, forty-one years old, first noticed on the 12th of May, 1871, a small hard nodule in the left breast. It was then attended with no pain or inconvenience. A month later she consulted a cancer-doctor, who applied some caustic and had charge of the case until the 1st of December. At that time the patient came into Dr. Walker's hands, and he found that a slough had been produced as large as the fist. Surrounding this was a fungous growth which the cancer-doctor had assured the patient consisted of healthy granulations, but which was in reality cancerous.

The speaker amputated the entire breast, after which progress was favorable and healing rapid, until the space uncicatrized was no larger than a dime, and even this might perhaps have healed but for the irritation of the clothing. Nine weeks after the operation there appeared two prominences near the left border of the sternum. They were removed at once, and the wound healed kindly. Three weeks later a large tumor was developed in the lower border of the cicatrix of the first wound, and this was removed. In all, five operations had been made; and it was noticeable that the new tumors were developed each time, after an interval a week or ten days shorter than their predecessors had been. The woman had gained thirty-five pounds, and showed no sign whatever of cachexia, and no derangement of any of the glands. The Doctor wished to know whether this rapid recurrence was common where there was no cachexia.

Dr. Washington L. Atlee, of Philadelphia.—I have had some experience in the removal of cancerous breasts, and have been in general quite successful. It strikes me that, in the case related, as there is no cachexia, and the patient is doing well, the cancer ought to be got out of the system. There has been no mention made of the general treatment.

Dr. Walker.—The general treatment has been a tonic one of iron and quinine, and she has taken two bottles of cundurango (Laughter).

Dr. Atlee.—I think the general treatment a point of very great importance, and without it I have very little confidence in the surgical treatment of these cases. The best *cundurango* we can use in the general treatment of any form of cancer is arsenic. My experience with arsenic is unusually large, and each year has increased my confidence in it. I have now patients in the city—and if it had occurred to me, I could have brought you four or five—whose breasts have been

amputated from five to twenty-five years, and who are examples of the protective power of arsenic, and of its extinguishment of the cancer-cell.

Twenty-five years ago a lady presented herself to me with a large breast of soft cancer, which we denominated fungus hæmatodes, because the great mushroom mass, almost black, looked ready to burst and let the patient bleed to death. I had no idea that she could be saved; but I put her immediately upon small doses of Fowler's solution—the maximum being three drops three times a day—and when her system was thoroughly saturated with it I extirpated the breast. It healed up readily; and, according to my observation, the wound for extirpation of cancer commonly heals more quickly than a like wound under other circumstances. I kept her under the influence of arsenic for one year after the cicatrization; and to this day she is a living example of perfect freedom from cancer.

Perhaps six or seven years ago, a teacher at the House of Refuge had an enormous breast, with an ulcer the size of my open hand. The case had been submitted to the best surgeons of the city, and pronounced incurable. Professors Gross, Pancoast, and Agnew all declined to amputate. I put her upon arsenic, and immediately removed the breast; and up to a very late period there had been no return of the disease. For the last few months I have not heard from her. She continued to use the arsenic for three months after the amputation.

Five years ago I removed a scirrhous cancer from a breast, which healed kindly under the constitutional treatment by arsenic. The woman remained free from disease about one year. Then it returned under the arm, and was cut out, and the arsenic treatment continued. There have been three returns since, the last operation being about three months ago; but instead of becoming more frequent, these recurrences are taking place at longer and longer intervals. The constitutional condition of the patient is improving; her cachexia disappearing; and I think the cancer-cell will be entirely extinguished.

If the gentleman will try the arsenic treatment in the case he has reported, I believe he will find, in the course of time, that he will extinguish the cancer-cell. I said my maximum dose is three drops of Fowler's solution. If this produces any irritation of the stomach, or any of the specific effects of arsenic, I reduce the quantity to the point of toleration, and there maintain its action unceasingly.

Some of the gentlemen present may recall a case, which I reported a number of years ago, of epithelial cancer of the lip, where seven operations were performed, the whole face mutilated, and a new mouth constructed. The experiment distinctly proved the influence of arsenic. Dr. Pancoast saw the case in consultation with me, on the occasion of the first operation, and said it was of no use to operate; there was already enlargement of the sublingual gland and of the parotid. But I removed the growth; and under the action of arsenic the man was protected for about six months from a recurrence. Then the disease returned and was extirpated; and so for several times afterward. Now, just in proportion as his system was charged with the arsenic, just in that proportion did the return of the disease diminish in frequency. At length, it was delayed for eighteen months. The patient had taken the arsenic for one year after his last operation, and six months after he stopped it the disease reappeared. It was then removed, and once again. The man is still living, I believe, still taking arsenic, and determined never again to leave it off; for while he clings to it he is safe from cancer.

Dr. Bronson, of Massachusetts, asked whether, when the tumor returned in the cicatrix, Dr. Atlee would remove it at once, or try to check its growth by the arsenic?

Dr. Atlee would certainly not wait, but would cut it out before it got bigger than a pea.

Dr. Bronson.—I was called two weeks ago to see a case where cancer had reappeared in the cicatrix after the whole breast had been removed. There are three distinct deposits the size of pigeons' eggs, and so deeply seated between the ribs that I believe removal is impossible. The ribs themselves are involved, and probably the pleura. The woman is simply taking anodynes and preparing to die. Now would arsenic be of any benefit in such a case?

Dr. Atlee.—In answer to that question, I would state that the woman would probably be benefited, not cured. I do not think arsenic will cure cancer, but I do believe it will protect the patient from the cachexia, and prolong life, and add to its comfort. Another point. I think that so soon as you place the patient under the habitual use of anodynes, you lose in some measure the benefit of the arsenic. In all chronic diseases I think we are apt to make the mistake of a too free use of anodynes, and that they interfere with the treatment.

Dr. Myers, of Fort Wayne, asked if cancer was ever especially prevalent in certain districts. It had seemed to him to be so in his own.

Dr. Horton, of Indiana, asked Dr. Atlee how he had reached the conclusion that arsenic would destroy the cancer-cell. Was it by the microscope or by clinical experience?

Dr. Atlee.—I have no theory on this matter. If I treat a case of cancer with arsenic, and see no return for twenty-five years; and if I find that without this treatment the disease will invariably return, I have a right to conclude that that cancer-cell, which pervaded the system, has been extinguished by the use of arsenic. How it is done I don't pretend to know.

Dr. John L. Atlee, of Lancaster, Pa.—I don't wish to start a family quarrel with my brother; but I confess that the first case he related, of twenty-five years ago, is one in which I think he may have made an error of diagnosis. Some six or seven years ago a woman was brought to me with a disease of the right breast, which I am bound to believe was chronic mammary tumor, as described by Sir Astley Cooper; though I am aware that is a very rare disease. Perhaps it is commoner in its slighter development, but it is rare in the state of advanced progress, when it assumes the form of fungus hæmatodes as closely as any two diseases can resemble each other. In this case there protruded from the breast a fungous mass as large as a small cabbage-head, made up of granulations, which wept from a pint to a quart of serous fluid every twenty-four hours. It had been seen by several surgeons of Philadelphia, who declared it incurable. I told the patient I would not pronounce it malignant, as it might be the chronic mammary tumor in a condition of excessive development; and that I would undertake its extirpation. I did so, and the woman is living and has had no return. Although I gave her arsenic, I have never to this day been satisfied that she had malignant disease. Now, the case first mentioned by my brother seems very similar to this.

Dr. W. L. Atlee.—You gave arsenic. That settles the matter, to my mind.

In reply to remarks by Dr. Horton on the pathology of cancer, Dr. W. L. Atlee said:

I think there is no doubt that cancer is sometimes a local disease, and not a blood-disease, in its origin,

and that it may become a blood-disease after it has existed as a local one. But in either event, and whether or not arsenic will destroy the cancer-cell under the microscope, I do not see that the results of its therapeutic action are affected. May I ask the gentleman how that cancer-cell is formed; what produces it? Cancer is not always a hereditary disease; it originates in the very best constitutions. There must be an action, therefore, that makes the cell; and if you can alter that action, then the cell will not be made. And if you can take away the whole body of cancer-cells in a tumor while the disease is still local, and then alter the action of the system so that no more such cells are deposited, I say the cancer-cell is extinguished by the treatment.

Dr. Horton remarked further upon the pathology.

Dr. Russell cited a number of cases where tumors, diagnosticated as malignant, had not recurred since their removal, from ten to fifteen years ago. They must therefore have been examples of local disease. No special remedy had been used, but nutrition had been carefully looked after.

GEORGE THOMAS AGAIN.

The Special Committee on the case of George Thomas now returned, and its Chairman reported as follows:

Dr. Moore, of Rochester.—We have made a very careful examination of this case, but have had no time to put our report in writing.

First, we directed out attention to the heart. We find the heart itself grossly large, and the main arteries also greatly distended. The impulse of the abdominal aorta is very readily and very strongly felt when the subject is lying upon the table. The arteries of the wrist are abnormally large.

When the boy undertakes to suspend the action of the heart, we find that action growing less, and less, and less, until it becomes imperceptible both to the ear and to the finger, showing certainly a very great diminution in its force.

With reference to the alleged transposition of the heart from point to point we observe these facts: When the attempt is made to "throw the heart," as he says, upon the left side of the abdomen, the right side is seen to become very much indented, and the left side to become a little extended. But we also note that there is a suspension of respiration, and a state of powerful tension of the whole of the muscular system. Synchronous with all this we find a very decided increase of the heart-sound over the tumor, while the ear of a second observer is kept upon the thorax, and the sound is still heard over the normal position of the heart. We observe similar phenomena, simply reversed, when he attempts to throw the heart upon the right side.

These are the facts. Our inferences from them are, perhaps, of no more value than would be those of any one else.

It is possible that, by the drawing downward of the diaphragm, the pericardium may be so elongated and narrowed as actually to compress the heart from the sides. It may also be supposed that, besides this mechanical action, there is an element of will acting in some peculiar way upon the heart through the nervous system.

With regard to the act of "throwing the heart" into the abdomen, as is claimed, that claim is by no means admitted. We have stated to you the fact, however, that there is an increase of the sound over the tumor; and this seems to us to be developed as a result of the extraordinary muscular tension. It is easy to understand, I think, that the compression of the abdomen, under this strain of its muscles, would have the effect of bringing the abdominal walls, the spleen, and the heart into very close relation with each other, and of increasing greatly the facility of transmitting sound. We are disposed to think this the true explanation, since the heart is still to be heard at its normal position at the same time that its sounds are so distinct below.

As to the peculiar action of "rolling the belly," it seems to me the result of prolonged training, commenced in early life. This has enormously developed the recti muscles, so that when relaxed they feel like a great mass of dough under the fingers, and has given them a power of vermicular motion precisely like that of a snake or an eel. Indeed, I am not sure but this case may throw a little light upon some speculations of the transcendental anatomists. One of these, as you know, is that the lineæ transversæ of the recti are the rudimentary homologues in man of the abdominal ribs of some lower animals—all we have left of them. Now these give an opportunity for each of the short muscles between them to act by itself; and by bringing them successively into action, the vermicular motion is produced.

One word more. There is no motion of the chest in breathing, or scarcely any. You tell the boy to take a long inspiration, and he immediately expands the abdomen into a great tumor, while the thorax remains perfectly quiet. This shows the wonderful action of his diaphragm—even more wonderful than the power of, and control over, the other muscles of the abdomen.

Dr. Horton asked whether the sound in the abdomen might not be due to the pulsations of the abdominal aorta.

Dr. Moore.—We thought of that, and it is possibly so.

Dr. Hoy had examined Dr. Grow, the man without a sternum; and he could suspend the heart's action for a short time by his will.

Dr. Moore's report was adopted, and he was requested to reduce its points to writing for the Committee on Publication.

At seven o'clock the Section adjourned, and referred its Minutes to the Association.

SECTION OF METEOROLOGY, MEDICAL TOPOGRAPHY, AND EPIDEMIC DISEASES.

Dr. George Sutton, Ind., Chairman; Dr. Elisha Harris, N. Y., Secretary.

This Section held three meetings, which were occupied chiefly in listening to the various reports referred to it. The results of its deliberations may be seen in the following official report to the Association:

"The Section of Meteorology, Medical Topography, and Epidemics, reports that the members of the Committee in several States have submitted records and reports relating to the subjects designated in the title of this Section of the Association. All the papers submitted the Section has carefully examined, and it hereby begs leave to refer to the Committee on Publication the following:

A Report on the Sanitary Topography, Climatology, and Epidemics of West Virginia (being a second report), by E. A. Hildreth, M.D., of Wheeling, W. Va.

A Report on the Climatology and Epidemics of South Carolina (including a *Report upon the Yellow Fever and the Dengue in Charleston in* 1871), by Manning Simmons, M.D., of Charleston, S. C.

A Report upon the Climatology and Epidemics of California, by F. W. Hatch, M.D., of Sacramento, Cal.

A Report upon the Climatology and Epidemics of Delaware, by L. P. Bush, M.D., of Delaware.

"The Section further reports that, in order to secure instead of the voluminous reports upon the physical geography, etc., of the regions, a large amount of freshly observed epidemic phenomena, and etiological history of diseases in every portion of the United States, it has determined to prepare a schedule of points to be observed, which will be distributed to its own members and to the other members of the Association, and it is hoped will contribute to more exact knowledge upon these points through the labors of the Association."

The Section of Psychology did not meet.

Medical Items and News.

Professor Lewis A. Sayre, M.D., of this city, has been made a Knight of the Royal Order of the Wasa by the King of Sweden, in consideration of his services to surgery in that country.

Operation for Stone in New York, 1769.—We are indebted to our friend Dr. Samuel W. Francis, of Newport, R. I., for the following extract from *Holt's New York Journal*, May 11, 1769:—

"On Thursday last a young woman, who for several years had been afflicted with the stone, had one of the size of a large hen's egg extracted by Dr. Jones, and we hear she is in a fair way of being very soon well."

Dr. Benjamin Howard, of New York, has accepted the appointment as Professor of Principles of Surgery, with Clinical Surgery and Diseases of the Genito-urinary Organs in the Medical Department of the University of Vermont.

THE MEDICAL CORPS OF THE ARMY.

At the annual festival of the Massachusetts Medical Society, held at the Music Hall, Boston, June 5, 1872, the Chairman, R. M. Hodges, M.D., proposed the following toast in recognition of the Medical Corps of the Army and Navy, and called upon Brevet Lieutenant-Colonel Warren Webster, Surgeon U. S. Army, for a response:—

"A high standard of qualification, proved by examination, is now the rigid demand of our Medical School. But the Army and Navy long ago learned that this was the only method to secure a staff of medical officers equal to the necessities of a time of peace as well as war. To follow their illustrious lead is to keep step with progress. We recognize the influence of their example as cheerfully as we eulogize their unfailing self-sacrifice."

SPEECH OF SURGEON WARREN WEBSTER, U.S.A.

Mr. Chairman—It is not often the good fortune of a medical officer in the Government service to enjoy such a festival as this, or his misfortune to be called upon for a speech in the presence of a society so learned and vigilant as yours. The routine of life at frontier military posts is not favorable to the cultivation of the studied contrivances of speech. But despite our isolation and dispersion, we are proud to remember our association with you of civil life, in a common profession and a common mission. Have we not the same early teachers? are we not strengthened by the same literature? and do we not revere the same fathers of medicine? Our duties in army life differ litle from yours in civil life. Our patients, be they soldiers, their wives and children, or officers and their families, are not exempt from ordinary diseases and injuries. Except in war, our distinctive title of surgeon is a misnomer; and even in campaigns the current ailments that claim the attention of the medical officer fall more largely to the domain of the physician than of the surgeon. To that extent needed professional knowledge is derived from medical rather than from surgical observation and experience. How completely, Mr. Chairman, has the "tide of things" reversed, in military life, the relation of these two branches of our science. In the dawn of modern army organization, professional duty was limited to the arrest of hemorrhage and the dressing of wounds. The only resource of the sick soldier was to drag himself from the line of march or the camp, and seek such precarious shelter and treatment as private or monastic charity would extend. The sovereign based his action upon an economic principle, as false as it was unchristian, that "it cost more to cure a soldier than to levy a recruit." Unable to provide for his treatment and insure his restoration to duty, and generally ignorant of his place of retreat, the army lost him forever. In this manner at the siege of Rochelle the want of adequate medical and hospital provision for the soldiers of Louis XIII. necessitated in the brief space of a few months three complete renewals of his army. With the establishment of hospitals came military medicine, and then the victims of disease and miasmatic infection received co-ordinate care with the sufferers from wounds. Later the beneficent laws of hygiene revealed themselves, and physician and philanthropist, within and without the Government employ, joined hands in the presence of this blessing of science. The intelligent soldier, who so rudely but surely learned during the late war that personal uncleanliness, foul air, dampness, badly policed camping grounds, inadequate clothing, bad cooking and intemperance in food or drink, all are the precursors of disease, returned to the pursuits of peace a convert to the truth which sanitary science now labors to introduce into private life. The treatment of wounded soldiers under trees nearest where they fell, and the segregation of the diseased in tents or rude shelters, where they recovered in greater proportion than those lodged within ceiled walls, not only taught the representatives of our profession in civil life a significant lesson, but furnished the germ of the American pavilion hospital system, which is winning commendation and adoption over the civilized world. If I were permitted to speak of another of the bright links that are binding in stronger and stronger unity the military and civic branches of our profession, I might allude to those contributions of American medical and surgical science which Gen. Barnes, the head of the Army Medical Bureau at Washington, is giving so abundantly to this country and to Europe.

Mr. Chairman—I have been a delighted listener to the eloquence of this festival. In the future roving of a soldier's life I shall look back to this occasion with unalloyed pleasure; and especially if you will allow me to offer the following sentiment:

The members of this Society who volunteered as medical officers in the armed struggle for the maintenance of this blessed Union of States! May an enlightened public opinion clearly appreciate how much of individual life and of public treasure they saved to this Commonwealth!

Extraordinay Fecundity.—Dr. Edward Mason (*Am. Practitioner*), at a recent meeting of the Elmore Medical and Surgical Society, Wetumpka, Ala., alluded to a case in which a lady bore seventeen children in nineteen years—twice giving birth to twins, and once producing four children at a birth. The latter died, but all the other thirteen survived.

Original Communications.

CEREBRO-SPINAL MENINGITIS.

WITH A HISTORY OF THE "BROWN" FAMILY.

By J. G. SEWALL, M.D.,

NEW YORK.

Having chanced to see quite a number of cases of this disease during the present epidemic, I have thought it might be useful to the profession to record my experiences with it. I begin with the "Brown" family, who were among the very first to succumb to its fatal influences.

(1st.) *Tuesday, Jan. 30th*, 1872.—Albert Brown, aged about 7 years, was kicked in the side by a schoolmate, and fell, striking his head against an iron railing. At 1 o'clock he went home (No. 445 Eleventh avenue), but made little complaint of his injury until 6 or 7 P.M. Pain in the head then came on, increasing in severity. What followed is unknown. He died at 4 A.M. on Wednesday, the 31st, no physician having seen him. A post-mortem examination held by Dr. Beach, Deputy Coroner, revealed a thin layer of extravasated blood covering the surface of the brain and extending to its base, with bloody serum in the ventricles. There was a large patch of ecchymosis at the seat of the kick, but no peritonitis, or other abdominal mischief. The doctor viewed the case as one of brain concussion, associated with the rupture of a small vessel which slowly discharged its contents. It is to be noted, however, that some dark purpuric spots were found scattered irregularly over the trunk, and which are very significant, in connection with what follows, as they indicate, unquestionably, it seems to me, the presence of this disease.

(2d.) *Sunday, Feb. 4th*, 11 P.M.—Maximilian Brown, æt. 4 years, having been ailing for 24 hours (although sporting a little with his father in the early evening), was seized with spasms and vomiting. The consciousness, however, was not lost, as is asserted. The boy seemed to be in a fright, calling after his lost brother. He was seen at midnight by a German physician. He died at 6 A.M., Monday the 5th. "Meningitis" was given in the certificate as the direct cause of death. No eruption was looked for, and no autopsy was held.

(3d.) Theresa Brown, æt. 13 years, at 2 A.M. Feb. 6th (Tuesday), complained of pain in her head, moaning and crying out. I saw her at 9 A.M. She had been up the most of the night at her brother's wake (whose body was now in the room), and was greatly affected at the sudden deaths in her family. Her intelligence was unimpaired. The pulse was rapid, but of good character; the skin of natural heat and moisture; urine normal and bowels open. Vomiting had occurred. Having no suspicion at this time of blood-poisoning, or "spotted fever," I viewed the case as one of nervous shock and exhaustion from excitement and fatigue, and ordered bromide of potash and applications of mustard.

Wednesday, Feb. 7th, 10 A.M.—Found her in much distress, wandering in mind, and complaining of pain in the head. No retraction of the neck. Intelligence complete. Pupils dilated. There was great hyperæsthesia of the entire cutaneous surface, more especially about the large joints, which she called rheumatism, a disease she once had had. The pulse was 120, of good volume. Tongue whitish, not dry. Through the night had a little disturbed sleep. She had vomited, and the bowels were freely moved.

My attention was now called to a fourth child. Berthold, æt. 11 years, who lay upon a lounge in a moribund state, with a cadaveric countenance of an icteroide hue. His pulse was very rapid and almost imperceptible; pupils contracted; skin dry and feverish. The mind was deeply clouded, and he could scarcely be aroused. It appeared that he had been to his brother's funeral the previous afternoon, six or seven miles away. On his return he seemed well, and ate a hearty supper. At 8 in the evening he grew ill, with head-pain, free vomiting, and movements from the bowels. No convulsions were present. He died at 2 P.M., 18 hours after the attack.

The same afternoon (7th) Dr. Büchler met me in consultation in Theresa's case. The inhalation of chloroform had procured some rest, yet she was now excited and in pain. Dr. B. pointed out a petechial eruption over the trunk and thighs, not abundant, in size from a pin's head to a bird-seed, persistent, deep purple, not blotchy. A similar appearance was noticed on the body of the dead boy, the spots being more abundant and more distinct. A diagnosis of Spotted Fever or Cerebro-spinal Meningitis was determined. Morphia 1-12 of a gr. every second hour, with beef-tea and milk punch, were ordered.

Thursday 8th, 11 A.M.—Autopsy of Berthold by Dr. Beach. Rigor mortis strongly pronounced. Still some warmth of abdomen. Mucous and serous surfaces of the stomach present; the same purpuric spots as are observable on the skin, more abundant on the mucous coat. Scattered irregularly over the serous surface of both large and small intestines, a similar petechial eruption was noticed. Kidneys, lungs, heart, and liver healthy. The blood was everywhere very dark and fluid. A small white clot was in the left ventricle of the heart. The entire brain-surface was intensely congested, the sinuses being tense with blood, which was unusually fluid, though not altogether devoid of coagula. On severing the brain-substance, little points of blood welled out in all directions. The ventricles were nearly dry. Consistency of brain normal; nothing pathological noted at its base, or in or about the medulla; no exudative or purulent material was discernible.

Theresa was feeble this morning with cool extremities. Pulse 120, soft; spots as before; complaint of head and hyperæsthesia as yesterday. Four hours' sleep last night; much delirium and outcrying, but intelligence good, and attention readily secured. Morphine continued. In the afternoon she was more composed and her condition more favorable.

Friday 9th, 10 A.M.—Night indifferent, restless and wandering; pulse 130, feeble; skin warm; tongue whitish, not typhoidal; reports no pain in head or elsewhere; eruption as yesterday; no change in treatment. 7 P.M., pulse 116, fuller, more composed.

Saturday, Feb. 10th, 9, A.M.—About midnight the baby (æt. 15 months), which was nursing at last evening's visit, and appeared well, fell ill. She vomited two or three times and had a few loose stools. Muscular spasms were remarked, but no decided convulsion. At 9 this morning she died. Her body abounded in the petechial eruption, about thighs and chest especially. Autopsy twenty-four hours after death, by Dr. Leo. Body well nourished; rigor mortis considerable; pupils dilated; lungs somewhat congested; ventricles of heart well filled; the pericardium contained an unusual amount of serum; kidneys and liver healthy; dura mater congested, but no effusion of lymph or pus on or under pia mater or arachnoid; ventricles normal. The cord (examined for some distance) exhibited nothing abnormal; the blood appeared normal.

Sunday, Feb. 11th, 2 P.M.—Theresa much better; was up this morning; slept soundly all night. Pulse 86 to 88, soft, regular; eruption nearly gone; has some pain in limbs only; skin rather cool; tongue cleaning; pupils, which all along have been dilated, are now normal; takes milk and broth freely. She was removed to the hospital on the 15th, where she remained about four weeks, convalescing very slowly. I saw her on the 17th of March, in a large airy apartment, to which her family had removed a week or ten days previously. She was well and happy; over her arms and body were a few eruptions of ecthyma fast disappearing.

To the completion of this sad history there yet remains a final chapter.

(6th.) Henry Brown, the sixth and only remaining child, æt. about 5 years, on the 16th of March was taken ill with vomiting, headache, and some convulsive symptoms, in the new rooms of the family. On the evening of the 17th, when I first saw him, he was very restless, complaining of pain in the head and somewhat feverish. The pulse was rapid, soft and small. Vomiting occasionally occurred, and he was much prostrated. A considerable purpuric eruption was present over the trunk and thighs. He had no retraction of the neck. He continued much in this way till the 20th, when he was taken to the hospital, where he died on the 8th of April. Thus perished five out of six children in one family by this fearful malady. They are Germans, the mother a stout very healthy appearing woman, the father pale and thin and somewhat intemperate, yet not a sickly man. He is a tinman by trade, and they occupied the first floor of an Eleventh avenue tenement, the front room being used as his shop. They lived poorly, were crowded and badly nourished and ventilated. Beneath them in the cellar, from a loose elbow in the sewage pipe, communicating with the privy in the yard, were continually arising, for no one knows how long, the foul effluvia peculiar to this drainage, and which must have strongly contaminated their blood, thus rendering them an easy prey to this active destroyer.

(7th.) C. V. B., æt. 4½ years, a healthy, well nourished girl, living in a "first-class" house, at 2 P.M., Feb. 13th, was attacked with vomiting and prostration. At 6 P.M., after further vomiting, she became cool and pallid as if in a chill. At 7 P.M., when I saw her, she had considerable fever with a full pulse of 140, and was drowsy, yet perfectly intelligent. The tongue was moist, coated, and the breath was offensive. There were perhaps a half dozen indefinite points of echymosis scattered about the body, not viewed as characteristic of any affection at that time. The case was thought to be one of gastric fever, or perhaps a marked scarlatina. At 11 P.M. a convulsion was reported, after which she continued quiet through the night and intelligent, complaining chiefly of thirst.

9 A.M., *14th*. I found her warm, but almost pulseless. The countenance and body generally were dusky and livid. The petechiæ were now abundant and well defined. The intelligence was good. The bowels had been moved by a cathartic, the vomiting had continued, and the prostration was excessive. Stimulants proved useless. About 12 o'clock convulsions occurred for which she inhaled chloroform. At 1 P.M. she died quietly.

Autopsy 5 P.M. of the 15th. Twenty-five or thirty well-defined purpuric spots were scattered over the trunk and extremities. Half a dozen or more were noted on the serous surface of the stomach and intestines. Nothing morbid within the stomach, which contained three or four ounces of a dark-brown fluid. The small intestines were empty. Peyer's patches were everywhere thickened and prominent, and the solitary glands well pronounced. The liver was somewhat congested; heart, kidneys, spleen, were healthy; lungs, save for two or three small cretaceous deposits, were normal; the blood was everywhere very dark and fluid. The sinuses and superficial veins of the brain were congested, although not as fully as in the "Brown" cases. A little turbid serosity was noted at its base within the meshes of the arachnoid; its substance was softer than normal. Ventricles were empty. The soil pipes in the cellar of this dwelling were loosely jointed, and in one was an open hole, allowing a free outlet to the gases. No noisome odors, however, were detected by the inmates, who are uncommonly neat and tidy.

(8th.) Mrs. P., a widow, æt. 63 years, a strong and healthy woman living in the tenement No. 517 W. 26th street, was taken ill suddenly Wednesday, March 6th, in the afternoon. Her family thought she had an attack of intermittent fever. I first saw her on Thursday, 7th, at 10 A.M. She was semi-comatose with dilated pupils. In reply to questions an unintelligible muttering only was elicited. There was great restlessness, with extreme hyperæsthesia everywhere of the cutaneous nerves. A purpuric eruption, not abundant, but very well marked over the trunk and thighs, was present. There was considerable stiffness and retraction of the nucha. Pulse was very rapid, soft, and rather small. Bowels were loose after a cathartic, and vomiting had occurred. The skin was of natural warmth and moisture. A third of a grain of morphia by subcutaneous injection caused but little relief to the uneasiness. Ice was applied to the back of neck; wet cups were ordered also, but not resorted to. Medicine and food she spat from the mouth. The coma gradually deepened. Stertorous breathing followed with complete insensibility, and she died, Friday 8th, at 7 P.M., 55 hours from the attack. No autopsy was allowed.

(9th.) McC., boy, æt. 12, at 535 W. 39th st., I saw several times in consultation with Dr. Dumond, of 42d st. He fell ill on the 23d of March with vomiting, pain in head, and general distress and restlessness, with convulsive symptoms. At my first visit (March 29th) he had very well marked opisthotonos, the head being strongly retracted, and the spine considerably arched, and very stiff. This had been present from nearly the beginning, and for it he had been blistered. The head-pain was persistent, and there was difficulty of deglutition, due to the position of the neck. No purpuric eruption was visible, but there were two small patches of herpes on the chin and trunk. Hyperæsthesia of the skin and insomnia were prominent symptoms. For four weeks the opisthotonos continued, although he took in that time a half drachm of the extract of Calabar bean, and large doses of morphine with the bromide and iodide of potash. He made a good recovery. During his illness he was well nourished with an abundance of milk.

(10th.) M., a girl of 8 years, at 561 W. 29th st., upper floor, was taken ill, Monday night, April 1st, with vomiting, head-pains, and spasms. I did not see her till Wednesday at 9 A.M. She was then very lethargic and prostrated, saying feebly that her "head ached." The pulse was rapid and weak. The brows were knit, and there seemed to be an intolerance of light. The skin was normal, and there was constipation. No eruption or opisthotonos were present. She died the same night, being ill about 48 hours, retaining her consciousness to the last.

(11th.) McG., girl, 10 months old, living next door to last case, fell ill, Friday, April 10th, with vomiting, fever, and head symptoms. I first saw her on the 23d. The prominent symptom was a profound lethargy. Unless aroused, she slept continually. There were no

convulsions and no eruption. Stiffness and soreness of the neck and spine long persisted, causing her to cry out when lifted. For a few days there was much high fever of a remittent type, which yielded to quinine. The pulse continued very rapid, being often 160, but not especially weak. Nourishment was well borne, there being no vomiting since the first visit. For many days the conjunctivæ secreted an abundant purulent fluid. The pupils were generally dilated, and the intelligence good. She made a satisfactory although tedious convalescence. Vesication behind the ears; tr. iodine to the nucha, and tr. iod. potash internally were employed as adjuvants to nature, and seemed useful.

The sewerage of these two last-mentioned and adjacent tenements is simply abominable. At least sixty to seventy persons occupy them.

(12th.) K., a boy, 6 years old, of delicate constitution, eighteen or twenty months ago fell from the roof of a four-story building to the yard, and was uninjured, as far as could be determined, either then or since. Saturday, April 28, was as well as usual. In the evening he went for his father's paper and blacked his boots. At midnight he was seized with vomiting, pain in the head, and great feebleness. Sunday, 28th, 3 P.M., I first saw him. He was very pale, and could not sit in bed from exhaustion. Pulse 120, soft, and very weak. Still vomiting; no spots. No stiffness or soreness of spine or neck. Complains only of pain in the forehead. Answers questions very slowly, but intelligibly. Has had muscular spasms. The vomiting continued. He became unconscious with convulsive movements, and died at 5 P.M., seventeen hours from the attack. No autopsy.

(13th.) *Thursday, May 2d.*—Saw, in consultation with Dr. McClain, at 134 W. 35th st., a boy, 12 years of age, who was taken ill yesterday, P.M., with pains in the head, nausea, vomiting, and convulsions. Now (12 M.) unconscious, eyes very protuberant, pupils dilated, moaning, restless, very pallid, with stiffness and retraction of neck, very rapid and feeble pulse; no eruption is visible. The appearances are those of one nearly moribund. A leech was applied to either temple, and subsequently blisters to the shaven scalp between the ears. Carb. ammonia, wine, brandy, and milk were freely given.

Saturday, 4th, 11 A.M.—Found him quietly asleep, of good color; pulse 84, soft, and rather feeble. Consciousness had returned, and he had been very restless and sensitive, with little sleep till now. His improvement thus far seemed marvelous. On the 6th of June his physician informed me that he was very slowly improving, having been very ill in the meanwhile, and in a typhoidal condition.

(14th and 15th.) *Sunday, May 5th,* 3 P.M.—Saw two cases in the same room, in consultation with Dr. Campbell, one æt. 6 months, and the second 8 years, at 425 W. 32d street. The baby was six days ill, restless and moaning. Skin of normal warmth and moisture, sensitive to touch, pupils dilated, and in perfect consciousness. Neck and spine stiff, and retracted somewhat. No spots. Pulse very rapid and soft. Has had vomiting and spasmodic movements. Nurses well. Chloral in 1-gr. doses did not quiet it. Suggested a double dose, and a blister 3 by 2 to nape of neck. Two days subsequently it died convulsive.

The other patient was an intelligent boy, four days ill, with pain in forehead, a great deal of nausea and vomiting, and great cutaneous hyperæsthesia everywhere. The head lay heavily upon the spine, and lolled in every direction, without support, as a baby's. The eyes had an unnatural appearance, and at times, for a few days, he had double vision, and was delirious. The pulse was 96, of good volume, and compressible. The tongue had a white coat, and the bowels were open. There were no spots. He had a blister 1 by 4 to nucha, and took ⅛ gr. of morphia every three or four hours, P. R. N.

June 6th.—This boy was making a good but very tedious convalescence. He was unable yet to sit up, and was much emaciated. His restlessness and irritability were extreme, and had been all along, so much so as at times to get the better of his reason. Morphia, from ⅛ to ¼ gr. per diem, alone quieted him. Its influence, furthermore, was decidedly curative. Ergot, taken for awhile, was of doubtful efficacy.

(16th.) Jane W., æt. 14, of 419 W. 30th street. May 10th, sat in the sun—(therm. 86° in the shade at 3 P.M.)—in the morning, at noon ate no dinner, and complained of feeling dull and ill. In evening was feverish, with headache. At 4 A.M. (11th) she vomited a greenish fluid, and complained greatly of her head. There were muscular spasms, but no convulsion. At 10 A.M. she became unconscious (the family thinking she had a sunstroke), and I so found her at 11 o'clock. The pupils were moderately dilated, and very sluggish to light. Skin pretty warm, but scarcely feverish. Pulse 120, soft, feeble. Some retraction of head and stiffness of posterior cervical muscles. No spots. Tongue, mouth, and teeth dry. Ordered wet cups to the nape of neck to 3 ozs., to be wrapt in a double blanket wrung out of hot water, with a dry one over it, 10 grs. muriat. ammon. every two hours in milk, and wine and water, which was immediately attended to. No consciousness returned, and she died at 1 P.M. No autopsy.

(17th.) *May 12th.*—C., a boy, 6 years old, at 411 W. 26th st., had been ill three days with the usual symptoms of the disease—vomiting, cerebral disturbance, hyperæsthesia of the surface, etc. I found him very restless and sensitive, with dilated pupils, sluggish intelligence, rapid and rather weak pulse, coated tongue, and warm and moist skin. He was treated with a blister to nape of neck, carb. ammonia and bromide of potash. Four or five drops of laudanum in spts. nitrous ether, given occasionally next to the vesication, was worth them all. Of course, milk, beef-tea, and stimulants were resorted to liberally. Once an abundant crop of sudamina appeared for a day or two, but no petechiæ. He made steady although slow progress towards health for three weeks, when a pneumonia seizing him, he rapidly succumbed.

(18th.) J. M., æt. 4½, at 441 W. 39th, May 25th, fell ill two or three days previously. He had convulsions, for which he had been leeched. I found him entirely unconscious, with dilated pupils, convulsive twitching, retracted neck, rapid and feeble pulse, and much fever. There were no spots. A blister to nucha was ordered, with bromide and iodide of potash and a mercurial purgative. Within 24 hours consciousness returned gradually, with a development of great restlessness, insomnia, and hyperæsthesia. Tr. opii, three to four drops in sweet spirits of nitre, given as often as needed for quiet. Milk and strong beef juice brought him up handsomely, though slowly; and now (June 6th) he seems fairly convalescent. In this case, the only one where the temperature was observed, it averaged, during the height of his illness, from 101 to 103. There was more fever also than I have yet seen.

Two additional cases complete this catalogue. In one, a boy of 16 years, ill but 30 hours, death occurred from coma, without convulsions, just at my arrival. The second, a young man of 19, in the practice of Dr. Frazer, seen in consultation, proved fatal in the same way, after three to four days' illness.

As far as the disease has presented itself here, I think we may fairly infer:—

1st. That the term "spotted fever" is altogether a misnomer, but a comparatively few cases presenting any "spots," and these not characteristic, the same being observed in other profound blood-poisons, as typhus, purpura hæmorrhagica, etc.

2d. That the cause is in obscurity, as much so as that of cholera. Defective sewerage may powerfully aid in its development in certain cases, but does not account for it. Its wide-spread prevalence, extending from Ohio to Massachusetts, under varied climates, in pure as well as vitiated atmospheres, forbids this assumption. It seems to me that an inquiry, pushed in the direction of the late continued droughts, with the imbibition of the products of vegetable decomposition in the low wells and streams, may throw some light upon it. I think all must have noticed a peculiar unpleasant odor and taste in the Croton water through the winter and early spring.

3d. That the disease is not contagious.

4th. That the epidemic here and in the neighborhood has exhibited two forms. In one the brunt of the distemper seems to have invaded the cerebral meninges chiefly, and in the other those of the medulla and spine. The mortality, especially where it occurs suddenly, greatly prevails with the former. All convalescent cases have proved very tedious; and in some, I am informed, paralysis, affections of the special senses, and other neuroses have occurred.

There are a few points which seem to determine the diagnosis, and which occur pretty uniformly in nearly all cases. They are the suddenness of the attack—pain in the head, more or less severe, not referable to any part in particular; vomiting, prostration, dilated pupils, cutaneous hyperæsthesia, with restlessness, and a rather sluggishly acting intelligence. To these may be added, perhaps, constipation.

I close with a word about treatment. Two or more leeches to the temples, where the brain-symptoms overshadow all others, or wet cups, to a small amount, over the nucha, I judge are very useful. In all cases a blister to the nape of the neck is invaluable. Ice to the head and spine is a good application. The vapor bath in many cases is a very desirable agent. The bromide and iodide of potash seem to have been useful in some cases, and wholly inert in others. The ext. of calabar bean, from Caswell's, largely given to a boy with strongly marked opisthotonos, and long continued, availed nothing whatever. No internal remedy seems to me so valuable as opium in some form. It has the best effects in relieving the restlessness, insomnia, and hyperæsthesia, which are largely predominant symptoms in very many cases, is well borne in large doses, and seems, further, to exert a decidedly curative influence. Nourishment, milk especially, and stimulants, in most cases, are very important.

No. 354 W. 30TH STREET, NEW YORK, June 7th, 1872.

EIGHT CASES OF CEREBRO-SPINAL MENINGITIS, WITH REMARKS.

BY O. H. SMITH, M.D.,

BROOKLYN, N. Y.

I GIVE in as few words as possible a few cases of cerebro-spinal meningitis which have lately come under my care. I feel that it is the duty of every practitioner to add his *mite*, in the treatment of this formidable disease, to the general knowledge of the profession, in the hope that some systematic and reliable course can be decided upon that will promise some hope of success even in the treatment of bad cases.

CASE 1.—Asa C., æt. 23, was taken in the night of March 24, after a hard day's work, selling goods in a clothing store, with vomiting, chill, and headache. He at once took a dose of cathartic pills, put his feet in hot water, and applied cold to the head. He tossed about the bed until morning, and during the forenoon the bowels moved several times, but there was no relief. He got out of bed in the afternoon, and at 4 o'clock I first saw him. He was pressing his head with his hands, and walking the floor in agony. He would sit down and then get up, and was constantly changing his position. Tongue furred, respiration a little hurried, pulse regular and slow, with no unusual heat of head or skin.

Ordered him put to bed, and prescribed full doses of Dover's powder, combined with hydrarg. c. creta, also cold applications to the head and hot bottles to feet. Before he took the first powder he became delirious, and vomited soon after it was given. When I saw him again at 8 o'clock he was in convulsions, with legs and arms in constant motion—the whole excito motory system being in full play. Respiration quicker, pulse slow and full, pupils dilated and changeable, with the head inclined backwards. Ordered mustard to spine and nape of the neck, and gave bromide of potass. twenty grains every two hours. At midnight getting gradually worse, pulse begins to quicken, and respiration more hurried. Patient had been comatose from 8 o'clock, with great difficulty in swallowing, the jaws being immovable. Next morning was a little more quiet, but still unconscious, pulse smaller and quicker, respiration 60 and labored. During the day there was little change in the symptoms, stools involuntary, and he died next day, fifty-six hours from my first visit. While the patient was comatose or semi-comatose, and apparently unconcious, a sharp question put to his ear would arouse him, and he would open his eyes, and answer by a half nod. The spine was very rigid, and the head inclined backwards. After several doses of the bromide the patient appeared less convulsed, showing the bromide had a quieting effect on the nervous system, or that the nerve-centres had begun to tolerate the disease.

CASE 2.—Albert L., 4 years of age, taken April 4, with vomiting and great heat in the head. Found him with wild expression and flushed face, pulse quick, respiration hurried, and pupils changeable. Ordered a mustard foot-bath, cold applications to head, a blister to nape of the neck, and gave ten grains bromide of potash every two hours. Convulsions soon followed, and patient died in twenty-four hours from attack.

CASE 3.—H. F. aged 9 years, a strong boy, had all the usual symptoms, chill, vomiting, headache, etc. April 12, first saw him the second day after the attack. Applied blister to the spine, from occiput down, and gave full doses of opium. Complete vesication took place, and he quieted down and slept well under the opium. There were great cerebral disturbances beginning with the attack. Convulsions followed, and he died on the third day.

CASE 4.—Mrs. J., æt. 20, just recovering from a miscarriage, was taken, April 24 h, with vomiting, chills, pain in the head and neck. She had a most anxious expression of the face. Pulse small, respiration a little accelerated. Head and nape of the neck showed more heat than the rest of the body. Ordered ice bladders to spine and occiput and gave full doses of opium. The ice felt good and relieved somewhat the pain in the head. She slept under the opium and would wake feeling better. She went on two days under this treat-

ment with a good prospect of recovery. The opium was now given in smaller doses, and the ice began to feel uncomfortable and was suspended. On the third day the head symptoms became more severe in the evening, and full doses of opium were again ordered; at 11 o'clock she was relieved of pain and the case promised well again. At 3 o'clock she was doing well, when her husband fell asleep, and when he awoke at five in the morning she was dead. No autopsies.

Case 5.—Mrs. B., æt. 40, taken with the usual symptoms, May 1, vomiting, chills, pain in the head and nape of the neck, pulse small and slow, respiration normal. There was an expression of anxiety in the countenance, with great restlessness. Applied cantharidal collodion at once to the spine from the occiput down to the lower angle of the scapula, and gave two grains opii combined with 2 grains ext. hyoscyamus every two hours, also cold applications to head, and warmth to the extremities. Patient slept well under the opium and waked feeling refreshed. Vesication was complete in four hours, and the blistered surface discharged freely. Next day pulse fuller and irregular, respiration a little hurried, and pupils dilated and changeable. Continued opium and hyoscy., and applied poultice to blistered surface. Patient slept the greater part of the day while the whole body was drenched in perspiration. During the night had involuntary starts. Next morning appeared much worse, and a physician near by was sent for. He found her delirious and partially convulsed, and ordered stimulants. When I saw her at 11 o'clock she was much prostrated and had a wild expression of the face, with some delirium. Continued opium less frequently combined with quinine. Patient rallied and improved hourly. A slight diarrhœa set in, lasting a couple of days, with some nausea and vomiting. It is now twenty-seven days since the attack, and the patient is beginning to sit up. The spine is very weak and the head must rest upon the back of a high chair. In this case there has been a return of pain in the right side of the neck extending around to the throat, and a little more cantharidal collodion has been applied to the cervical spine. It is believed she will make a good recovery.

Case 6.—Child 2 years old, taken, May 6, with vomiting, great heat in the head, quick pulse, irregular breathing, neck arched, with partial opisthotonos. Applied cantharidal collodion at once to spine, and gave two grains Dover's powder with four grains hydrarg. cum creta every two hours to produce quiet. Cold to head, warmth to feet. Vesication was thorough in three hours. Bowels were moved by castor oil. Next day vomiting ceased—the blister discharged freely, and the little patient recovered in ten days from attack.

Case 7.—Child 9 years old, seen May 6, pain in head and back of neck, vomiting, chill, pulse slow and irregular, restless and irritable. Applied canth. collodion, and gave hydrarg. cum creta and opium, to be repeated often enough to produce rest.

Blister discharged freely, and the urgent symptoms passed away. Convalescence was gradual and patient was about the house in a week from attack.

Case 8.—Mrs. V., æt. 25, taken May 7, with chills, vomiting, pain in head and cervical region, and a feeling that the head must go backward. Respiration irregular, pulse slow, and pupils changeable under uniform light. Applied canth. collodion immediately, from occiput down, and gave two grains opii with two grains ext. hyoscy. every two or three hours to produce absolute quiet. She slept well. Vesication complete. Next day moved the bowels with oil, and continued opii and hyoscy. Head-symptom relieved, continue treatment and convalescence gradual. The third day there was temporary paralysis of the right limb, which lasted a few minutes. On the fifth day the same occurred again and soon passed away with hand rubbing. She made a good recovery in ten days from attack, but with very weak spine and heavy head.

Remarks.—The cases that died showed more brain-disease than those that recovered. In fact, the first four cases had progressed several hours or days before medical aid was called, and this may help account for the mortality.

Possibly the other four cases that recovered, or some of them at least, would have gone on to a fatal termination, if they had been overlooked by the physician, or left to themselves. But they were treated promptly and on the spot. The cantharidal collodion was applied several times along the spine, from the occiput down, and thorough vesication took place in from 3 to 4 hours, and there was a profuse discharge of serum from the vesicated track, which lasted several days.

If in this disorder there is a blood-poison that is disposed to attack the spinal chord or its membranes, or the cerebrum or its meninges, or both together, and a compromise can be made, so that the skin and soft tissues covering the spinal column shall be made to suffer instead, then a most vital point is gained in the treatment, and the quick blister performs an important work. One thing is certain, that the blisters relieved the pain in the head and neck, and the discharge from them was unusually offensive.

Opium, the great antiphlogistic in all serous inflammations, keeps the suffering patient quiet, equalizes the circulation, relaxes the whole system, and produces profuse perspiration.

This subdued state of the system would really prevent an inflammatory attack upon the brain or its membranes, and if such inflammation really existed, this plan of treatment would well be calculated to relieve it, unless it had gone far enough to produce effusions of lymph or serum, lesions always to be expected if the disease be left uncontrolled. Hence the prompt and heroic treatment can alone save the bad cases, if we take this view of the disease. Six of the eight cases reported above were found within a few blocks of each other. Several other cases, nine or ten in number, occurred in the same area, and about the same time, and were treated by other physicians, three of which I saw, and all, or nearly all, died.

This number of cases in one locality (and that a healthy one), would argue that the disease was either epidemic or contagious. But I have never seen two cases in one family, nor in one house, and have never seen anything in causing the disease that looked like contagion or infection.

It is proper to say that in the eight cases only two or three had any eruption or spots upon any part of the body, and these were among the cases that recovered. It is unfortunate that this disease has been called "spotted fever," for the spots are not constant, only accidental, and leave an erroneous impression upon the public that the disease is highly contagious.

I have no idea what are the causes of the disease, but am quite certain that prompt vesication over the spine, and full doses of opium saved several well-marked cases.

These hints are thrown out to the profession very imperfectly and in great haste.

Massachusetts General Hospital.—The late Quincy Tufts, of Boston, leaves by his will ten thousand dollars to this Hospital.

TREATMENT OF STRICTURES OF THE URETHRA BY LAMINARIA DIGITATA AND GALVANISM.

By ROBERT NEWMAN, M.D.,
NEW YORK.

(A PAPER READ BEFORE THE MEDICAL JOURNAL ASSOCIATION OF NEW YORK.)

It is not my intention to speak of the treatment of strictures in general. Elaborate works on that subject are written by many authorities. Medical literature abounds with treatises on this subject. This Society has recently listened to valuable papers on Strictures. Neither is it my purpose to recommend one particular treatment as the best; and to condemn all other. The true physician has no direct panacea for certain diseases. On the contrary, he always feels the necessity for close and accurate observation upon the phenomena developed by particular cases, and adapts his treatment to the peculiar needs of each patient. In this way each case of stricture requires examination, and the application of its appropriate means of cure.

There are different kinds of stricture, such as the spasmodic, the inflammatory, the traumatic, the granular, the fibrous, the cicatricial, the calcareous, etc. It would be absurd to suppose all of these varieties could be treated alike; although in all cases, our treatment has but one common aim, *i.e.*, to restore the urethra to its normal state, calibre, and power of healthful action. There are many instruments ingeniously devised to secure this end, and each may find proper employment in the peculiarities of the disease, as it develops itself in different cases. But the best way to accomplish the end must be left to the judgment of the surgeon, and I cannot too strongly insist upon the necessity of the most careful examination and perfect understanding of the difficulty before any plan of the treatment is instituted. Neglect of this first most important step has frequently resulted in very serious complications, injurious to the patient. When this has been accomplished, the surgeon may safely pursue any of the established methods, or which is better, depend upon his own judgment and experience in making choice of the fitting remedies to effect a cure.

The knowledge through examination is gained by: 1st. Digital touch, committed to the fingers by transmission of the exploring instrument. 2d. By exact measurement to ascertain the exact locality, length, and size of the strictures, and 3d. By ocular inspection through the endoscope. The latter will give valuable information, and is alone capable of revealing the true condition of the parts, which decides the character of the stricture. When the tube of the endoscope is withdrawn from a urethra, which is sensibly indurated, and especially if there be a slight stricture, the canal closes behind the end of the instrument with a certain abruptness; a circumstance, which is in striking contrast with the gradual way in which the healthy urethra closes, when similarly manipulated. If the tube of the endoscope is arrested by an organic stricture, the ocular inspection will show the exact form. Of course we see that the calibre is narrowed, the tissues altered and indurated. The real stictured part is contracted in various ways and forms: it may be a regular ring, but more frequently we see irregular slits in different directions, oval, round, square, triangular, serrated, and other irregular shapes. Such strictures are not necessarily in the middle, but frequently are seen on one side of the focus. If the stricture is so slight, that a smaller tube will pass it, then it is necessary to examine the lower parts of the urethra, in order to ascertain if other strictures are present. In withdrawing the tube, the peculiar abruptness of the stricture upon the instrument can be seen and felt by the guiding hand. Often another condition will be found. The tube is arrested, at the same time the patient complains of soreness, even of pain. Then the inspection shows that the calibre of the urethra is narrowed by granulations, which in the centre of the focus are elevated, hanging in small red rotulas, with a peculiar shining lustre, giving it a strawberry appearance. Below these granulations and underneath, the longitudinal fibres radiate towards the periphery from little centres, resembling a contracted pupil. These fibres are less regular and distinct than in health, and sometimes are even interrupted and indistinct. The cure of the granulations by local applications is the only rational one, and thereby the stricture will also disappear. In former times we were taught, that the introduction of the steel sound by its weight presses the granulations until they are cured. But such treatment was notoriously unsuccessful, and the fallacy of such theory is now easily understood. Dr. Otis in his valuable paper says: "We may, then, affirm as a most important axiom, that the slightest abnormal encroachment upon the calibre of the urethral canal, at any point in its course, is sufficient to perpetuate a urethral discharge, or even, under favoring circumstances, to establish it *de novo*, without venereal contact." I endorse this most heartily as an important fact, and may add, that the discharge will disappear as soon as the calibre of the urethra is restored to its normal size. This is very important in the treatment of gleety discharges and strictures. Injections continued for years will not cure a gleet, so long as the stricture or the granulations remain.

In speaking of gleet and stricture, the cause and consequence may be easily confounded. As a rule, the first step is an old, uncured, and neglected gonorrhœa. A stricture is the consequence, which again is followed by gleet: the usual one or two drops every morning accumulating and emerging from behind the stricture.

In considering the treatment of the *Organic Stricture*, the majority of surgeons prefer dilatation. This can be done by gradual dilatation, or by rupture. The dilators and divulsors of Voillemier, Thompson, Holt, Otis, Reybard, Civiale, etc., etc., have their advocates, and may be used in appropriate cases. But according to authorities, in most cases a gradual dilatation will be preferred.

Speaking of such strictures, in which the best method of treatment is gradual dilatation, it must certainly be an improvement, if *such* gradual dilatation can be done with rapidity, as well as safety. And this is effected by the use of laminaria and galvanism, which we will consider to-night.

Luminaria digitata, seatangle, seaweed, is a sea-plant growing near the coast, beneath the water. It is found in Ireland, Scotland, California, etc. For the treatment of stricture these bougies, which I show you here, are used. They come in six different sizes; No. 6 corresponding to a small No. 5 of Tiemann's gauge, and No. 1 filling ¾ of No. 1 of the same gauge. In relating to numbers hereafter, the comparison is made according to Tiemann's gauge. The following experiments will show the dilating power these bougies possess. A laminaria bougie, No. 3. was submerged in water, and was found to dilate as follows:

In 1 hour 5 minutes to No. 6.
" 2 hours " 7.
" 4 " 15 " " 10.

Other experiments, all made in May, 1867, had similar results. I present here another specimen, which I have submerged in water to-day at 12 o'clock. It has

remained there seven hours; it is a No. 6, and is now dilated to No. 16. Dry air will contract it again to its former size. The grade of expansion depends on the moisture surrounding the laminaria. This law must be taken into consideration, and certain precautions used. Some parts of the urethra, which have more secretions or more moisture, will dilate such portions of the bougie to a greater degree, and that part within the bladder, surrounded by urine, will expand to such an extent, that it is impossible to withdraw the bougie through the parts of the urethra, not so much dilated. Such an accident may be detrimental or even dangerous to the patient. The failure or success of the operation will depend much on the attention and care of the surgeon. If the ordinary precautions are used, success must follow. The following rules must be observed to insure success:—

1. The bougies must be made from an unblemished piece of the plant, taken out of the middle, made with care and equal in its whole length and size. If there is the slightest suspicion of unevenness it should not be used.

2. That part of the bougie which will occupy the portion of the urethra below the last stricture, and particularly *that* part of the bougie which enters the bladder, must be varnished previously. Mastich varnish can be used. If the varnish is applied just before using, the laminaria may dilate a little, but if several coats are applied and allowed to dry, no expansion can take place.

3. As any oily substance hinders the expansion, no oil must be used. The bougie before introduction must be placed in cold water, until it gets a soft, velvet-like touch.

4. The bladder must be emptied before the operation, to avoid uneasiness and overdistention.

5. The urethra ought to be injected with water, to relax the parts and favor the moisture for rapid dilatation.

6. The measure of the urethra and seat of strictures must be carefully taken, notes made, and the bougie prepared accordingly.

7. The bougie, when ready, must be introduced at once, straight, without hesitation, twisting, or resting in its passage; otherwise it will cause pain, or, as dilatation goes on immediately, it will not reach the desired depth.

8. After insertion, the bougie must be left alone, and not meddled with, or tried to move.

9. It must be left inside undisturbed for two to four hours, according to circumstances, consulting the feeling of the patient.

10. The patient during this time is left in a recumbent position, and attended or observed by the surgeon.

11. In removing the bougie, the surgeon takes hold of the bougie, and uses firmly and gradually tractions in the same direction.

If some surgeons have failed with laminaria, they either have not observed these precautions, or they have had imperfect bougies, or selected impracticable cases.

This treatment is most indicated when the stricture is very small, almost impermeable, and no time can be lost, as the No. 1. bougie of laminaria can be introduced easier than the usual sounds or catheters. In a few hours the patient is relieved, and can micturate without difficulty. No bad results can follow, nor will it interfere with his attention to business. This latter advantage is a great consideration, as the treatment with divulsors or dilators almost always causes pain, sufferings and detention in bed and from business. As soon as the stricture is dilated so far that a steel sound of a larger calibre can be introduced, the laminaria has done its duty, and it is better to abandon its further use, and continue with other means. These are either steel sounds or galvanism.

Electricity in the treatment of strictures is by no means new, and has been reported as far back as 25 years, or perhaps earlier; but the use of *galvanism* for such purposes is only of recent date, and worked methodically by Mallez and Tripier. Much confusion of terms and ideas arise from want of definite information upon the subject of electricity, and the vague and undefined results afforded by partial experiment and analysis of this imponderable agent in therapeutics. It is not surprising that many false statistical reports, and the confounding of scientific terms go on record; thus the first "blistering galvanic battery" was patented in the United States about 19 years ago. Now galvanic batteries, such as we use at present, are only about 12 years old, and many improvements since that period have been made. So when we read of the use of galvanism of a prior date, we may be certain that it is an incorrect statement. I will here mention only *one* such instance reported in the Medical Record, December 1st, 1868. The gentleman tells us that he has cured a stricture in 1844 with the "Pike's galvanic battery," which he carried with him in his carriage. A little reflection will show that a galvanic battery could not be taken in a carriage over country roads on the daily visits of a physician. What becomes of the acids in the open cells? Next, I know that Pike never made galvanic batteries. By accident, I came across the same kind of battery, at the house of a friend, used in the case represented above, which fully explains the mistake in the report. The inscription proved that it was an electro-magnetic machine, made by Benjamin Pike, jr., 294 Broadway, introduced November, 1843. Therefore the gentleman had not used galvanism, but only the Faradic current.

From authorities on this subject, it seems that Mallez and Tripier deserve the credit for having revived, if not originated, the treatment of strictures by galvanism methodically, with improved instruments and appliances.

The success in curing a stricture by the galvanic battery depends mainly upon the chemical effect of absorption of the altered tissues forming the stricture. Alkalies go to the negative; acids to the positive pole. Consequently we use the negative pole to produce the effect of absorption, which will act as a caustic alkali and not produce any cicatrix.

To regulate the strength of the battery to the strength of the patient is an important point in electro-therapeutics. In all drugs we have an established dose, which we again regulate according to circumstances and the individuality of the patient. Should electricity be given at random? The regular dose in the shape of the strength of the current ought to be ascertained, otherwise the intended remedial effect may be detrimental. Now the question arises, what instrument will best fulfil our purpose? In most of my experiments I have used a Stoehrer's sixteen-cell galvanic battery; but in the use of this very convenient apparatus I have met with some difficulties, which it was impossible to overcome without very complicated auxiliary instruments. This battery permits grades only by two (2) cells, which, increasing or diminishing, is too great a difference, and the intensity of the galvanic current, thus altered, is too sudden, causing in the patient a nervous irritation, shock, and pain.

The size of the elements in Stoehrer's battery is far too large, and the quantity of electricity thereby generated is too powerful to produce the proper effect; consequently the destruction of tissue is too great.

This, again, will cause pain, which patients refuse to endure.

A large surface of battery will cauterize with more intensity than any other known caustic. By using the necessary amount of electrical current thus generated, to enlarge the sphere of action, too much inflammation of the surrounding healthy tissues may supervene, and thus aggravate the disease. No action should ever destroy healthy tissues, the only effort to be made is to restore the morbid parts to their proper normal condition of health; therefore the concentration of the electrical current should be strictly confined to the diseased locality only.

To this peculiarity of the Stoehrer battery some failures are due, and I greet with great satisfaction, and exhibit here the new galvanic battery invented and manufactured by Luis Drescher & Co.

It is a very handsome, portable instrument, which combines elegance with cheapness. It contains 20 cells, and is sold at the same price as Stoehrer's 16 cells. The great objection to large surfaces is here overcome, and in the trials made I found decided advantages in the two following points:—

I. The intensity of the current can be augmented gradually cell by cell, without any interruption of the current, and the patient will hardly perceive the increase of intensity which can be used above the power of Stoehrer's battery.

II. The quantity of electricity is reduced to a point sufficient to produce the most intense action on a very limited space.

In treating a stricture, I always first ascertain the susceptibility of the patient to the galvanic current. Then to the negative pole is attached a metallic conductor into the urethra down to the stricture. These instruments are made from flexible catheters, the end of which is a lead or nickel bulb, about a half an inch long, connected with the battery by a wire running through the middle of the catheter. The catheter itself acts as an insulator and protector to the other parts of the urethra.

I here exhibit a full set of the catheter-electrodes, a complete assortment of all sizes made also by Luis Drescher & Co. The insulation is perfect, and the egg-shaped form proportionately in length to its diameter. As soon as the catheter or the negative pole is connected with the battery, the circuit is completed by the positive sponge electrode, either placed over the suprapubic region or grasped with the palm of the patient's hand. Then the current is very gradually increased from one cell upwards, till the patient feels a slight pricking, and can tolerate it without pain.

The galvanic stream must never be so strong as to cause pain or burning, otherwise it acts as a galvanocautery, destroys healthy tissues, forms cicatrices, new strictures, complicates matters, and the difficulty is increased. In ending the operation the battery must be gradually decreased to cell one (1), and then the current interrupted by removing the electrodes. Failures may be due also to too prolonged or too frequent applications. Repetition of the application must be made at intervals of at least two weeks, or sometimes longer.

The foregoing will be illustrated by some cases, which are clinical facts.

Case I.—*Stricture cured by Laminaria Bougies, May 13th*, 1867.—A. L. C. of Brooklyn, came to my office with the following history: He had contracted a gonorrhœa 2½ years ago; discharged for some time, which was followed by a gleet, and in due time a stricture was formed; was treated by an eminent surgeon with apparent success, but he soon neglected the stricture. Had another gonorrhœa three months ago; the stricture grew worse and troubled him much; sometimes spasmodic. On examination there were found three distinct strictures. Only a sound No. 8 could be used for the introduction which reached stricture No. 1. The other two strictures were found with a sound No. 4. In the afternoon a catheter No. 3 was introduced, and the water drawn off; then a wax bougie No. 4 passed nicely.

Contractions of the bladder were painful and were controlled by morphine.

May 14th. Laminaria bougie No 2, varnished 1½ inch at the end, was introduced four o'clock in the afternoon, six inches above the varnished part. Hence the bougie was introduced 7½ inches. The bougie was removed at 6 o'clock, having been inside fully 2 hours. Then it was found dilated to No. 5. Went home, feeling better without any pain or inconvenience.

May 15th. Passes urine freely and since yesterday has felt well.

May 17th. Laminaria bougie No. 4 was left nearly three hours. When removed was dilated to No. 8.

May 19th. Laminaria bougie No. 5 was left three hours, on removal was not equally dilated. The strictures were well marked by constriction at the bougie, varying from 6 to 9.

℞ Hydrarg. bichloridi.....gr. j.
Extr. belladonnæ.....g. vj.
Glycerine.....℥j. M.

To apply on conical bougie No. 6.

May 21st. Felt well and in good spirits. After this the strictures were dilated gradually with steel sound to No. 12.

Here we have stricture made tolerably easy within 2 hours, and dilated to its normal size in 7 days.

Case II.—*Aggravated Stricture in Prostatic Portion. —Laminaria bougie—permanent cure.*—Mr. J. R., Hotel keeper, came in great agony, suffering from a stricture which was so small that it prevented him from passing water. The urine dribbled away drop by drop. He had endured the stricture for several years; had treatment off and on.

October 14th, 1867. On examination found stricture in the prostatic portion. A steel sound No. 11 entered the meatus and passed on for 6½ inches, where it was arrested by the stricture. Various instruments were tried, none were small enough to pass the stricture. At last Mixor's instrument was pushed up to the stricture, and the enclosed cat-gut passed with great difficulty into the stricture, but not beyond.

Oct. 18th. Dr. Finnell was kind enough to assist me. All the usual instruments for the passage of the stricture were tried in vain; even the smallest Laminaria bougie No. 1 would not enter. After many trials a No. 1 zinc sound entered.

Oct. 21st. Zinc sound Nos. 1 and 2.

Oct. 23d. Zinc sound No. 2. The No. 3 would not pass. The Laminaria bougie, No. 1, went easily into the bladder. It was left there for two hours. On its removal it was found dilated fully to No. 4.

Nov. 2d. After an absence of nine days, the patient returned and reported easy. Is very much improved and relieved by passing water freely. Catheter No. 3 was introduced with a little difficulty. Laminaria bougie, No. 2, was left for three hours. On removal was dilated fully to No. 5. Immediately after he passed water easily.

Nov. 11th. Patient after each visit left for home, which is 44 miles distant from New York. He made the journey without experiencing any difficulty. Catheter No. 5 passed readily. Sound No. 6, with some difficulty, was left inside for eleven minutes.

Nov. 14th. Sound No. 6 passed easily. Same man-

ner laminaria bougie, No. 3. Left for three hours, when it was dilated fully to No. 8. This figure represents the urethra at this stage, drawn from the appearance of the laminaria after removal. At *a* will be seen a little constriction, which shows a small stricture; at *b* begins the large stricture, fully six and a half inches from the meatus. The duct. ejaculat. are at *c*, seven and a half inches from meatus.

The penis of this patient is small, the whole urethra measuring only seven and a half inches. As the stricture is six and a half inches from the meatus, and one inch from the duct. ejaculat., it follows that said stricture is in the prostatic portion. This is a noticeable fact, as S r H. Thompson denies the existence of strictures in said locality. The last laminaria bougie was introduced eight and one-fourth inches, therefore three-fourths inches within the bladder. The lower portion was, of course, properly varnished.

Nov. 19*th*. Some soreness about the stricture; could not introduce sound No. 7.

Nov. 26*th*. Sounds 7 and 8.

During December, in four visits, dilatation was continued with steel sounds.

Jan., 1868. Treatment continued. In four visits sound No 11 passed easily.

Feb., 1868. Sound No. 12 easily.

March, 1868. He passes sound No. 11 himself. The urethra appears normal, and he was therefore considered cured.

August 25*th*, 1871. Just 3½ years afterwards the same patient appears again with an acute urethritis, contracted 2 weeks ago. For several years he has not passed any sound. On exploring with a large steel sound No. 10, find to my surprise that it slips into the bladder with great ease, and that no trace of the former stricture is left.

The urethritis was cured in a few weeks. Have seen the patient only recently, explored the urethra again, and found him perfectly healthy.

This case is an important clinical fact. It proves beyond any doubt, that strictures can be cured, and also the efficacy of the laminaria bougies, etc. Objections may be made to my mode of illustrating this fact, for it is said, strictures within the prostatic portion are not believed to occur unless it is proven by a post-mortem. To either I have to say that if such a stricture is cured, the post-mortem demonstration of the fact cannot be made, and if a post-mortem examination shows a stricture within the prostatic portion it could not have been cured.

Still another case of stricture within the prostatic portion of the urethra has come under my observation recently. The stricture was seven inches from orifice, sound 12 passed easily, until seat of stricture. A steel sound No. 7 could only be pushed through stricture with difficulty. Galvanic Battery applied, and the bougie No. 10 with bulb of lead passed gradually into the bladder after five minutes' galvanic current. After this a steel sound passed easily. The case is of too recent observation, and therefore cannot place it on file as a decided success.

[*May* 30*th*. The patient has been kept under treatment, and the stricture cured. To-day sound No. 13 passed easily into the bladder.—R. N.]

Dr. G. C. Terry presented a specimen of stricture of the urethra in the prostatic portion to the Pathological Society in 1867, which is another proof that stricture can appear in the prostatic portion; in this case it was demonstrated by a post-mortem inspection.

Case III.—*Stricture cured by Laminaria and Galvanic Battery.*—F. S., after a urethritis had for the last eight months a slight discharge of a gray and greenish color. The discharge is very small in quantity, but constant.

March 7*th*, 1871. On examination with a glass tube and mirror found a stricture 1½ inches from meatus. Bougie No. 3 passed the stricture.

March 8*th*. Laminaria bougie No. 4 was passed with difficulty, the size being almost too large to pass the stricture.

During the time of pushing it along, the Laminaria began to dilate, in consequence of which it could not be pushed further than 3¼ inches from meatus. Was left there for 3½ hours.

The dilatation from meatus *a* to stricture *b* was round, and equally expanded to No. 7, the stricture itself was well marked, constricted and dilated only to No. 6. The other side beyond stricture, the bougie was flattened, and dilated to No. 8. He left my office immediately afterward, very comfortable and without pain.

March 20*th*. Sound No. 7 passed stricture easily. Sanies discharge of serum and a little blood, but had no pain.

March 21*st*. Bougie No. 8 would not pass the stricture. Galvanic battery applied. Positive pole covered with sponge in hand. A bougie with a lead bulb at the end attached to the negative pole was introduced into the urethra and arrested at the stricture.

A constant stream was then applied with 10 cells for 2½ minutes, when the bougie passed freely through the stricture, and was arrested by a second stricture at 5½ inches.

April 3*d*. Bougie No. 9 passed tightly. Galvanic battery bougie passed through both strictures, 10 cells for 5 minutes. The bougie passed the first stricture after 2½ minutes, the second 5½ inches after 4 minutes.

April 10*th*. Urethra still sore but no indurations felt. Sound No. 10 passed easily.

April 18*th*. Examination with glass tube and mirror cannot discover any granulations or sores. Sound No. 11 enters.

April 27*th*. Sound 11 and 12 passes.

May 8*th*. Examination with endoscope reveals only healthy tissue. Dismissed as cured.

Jan., 1872, was again seen and found in good health.

Case IV.—*Stricture cured by Galvanic Battery.*—H. W. B., Merchant, married. Had a gonorrhœa two years ago. Urethra discharged for several months, after which he had gleety discharges off and on. Has now some sanies discharge, and sometimes a burning sensation on micturition.

Sept. 14*th*, 1871. Endoscopic examination.

Small tube met with some constrictions in the urethra, and was arrested at 5 inches.

On inspection the urethra was found a little thickened and red. The stricture could distinctly be seen as an irregular slit diagonally from right to left. Very slight points of granulation springing up almost below the stricture.

Sept. 25*th*. Sound No. 9 passed with difficulty, and was arrested at 5 inches. Galvanic battery 10 cells. From negative pole, the bougie No. 10, with a nickel point, was introduced into the urethra, constant stream for 2½ minutes, passed the stricture easily.

Oct. 24*th*. Galvanic battery as before—bougie No. 11, nickel end, after which sound No. 12 was introduced. Patient was ordered to use sound No. 11 once a week.

Jan. 18*th*, 1872. Saw the patient again, and found him well. Sound No. 12 passed.

Case V.—*Stricture.—Cause of the failure of Galvanic Battery and Laminaria.*—A case is added in which the

galvanic battery and laminaria did not cure the stricture, but on the contrary made it worse. The cause of the failure, however, was explained, and I relate it with the intention of showing how important it is to make a correct diagnosis. Injudicious selection of cases for the operation, and a false diagnosis, will necessarily be followed by failure.

B. A. came to my office last fall with an acute urethritis, which was cured by mild injection within about three weeks, after which a steel bougie No. 12 passed easily into the bladder.

Two months afterwards he appeared, and complained of the breaking out of a slight discharge; on examination found a stricture at 4½ inches. Galvanic battery was applied twice at intervals of two weeks. Each time the negative-metallic electrode Nos. 10 and 11 passed into the bladder. On each succeeding visit, however, the stricture was worse. The stricture was so small that an endoscopic examination was impossible. Light thrown by a mirror through a glass tube shows only healthy tissue, mucous lining had a natural color, orifice and walls normal, no discharge to be seen. Cause of stricture unaccountable. Laminaria bougie No. 5, varnished at the end for one inch, was introduced 7 inches from meatus at 2:40, P. M., left there for three hours, and after removal found to my surprise bougie dilated *only* to No. 7. A large quantity sanies discharge followed the bougie from the urethra, which was characteristic of chancre.

The patient was immediately put under constitutional treatment, and recovered in a few weeks. I conclude that the patient when first seen had only *Gonorrhœa*, which was cured. Afterwards the syphilis developed, and a chancre appeared within the urethra, causing the pseudo-stricture, which was not recognized at first. The case is instructive, and shows one of the reasons of failure, in the treatment of stricture with galvanism and laminaria.

These cases I believe will suffice to illustrate the efficacy of galvanism and laminaria in the cure of stricture. This method is not sufficiently understood and adopted. From my experience I discovered that the following rules ought to be observed in its application.

1. Before the operation, the susceptibility to electricity of the patient should first be ascertained, and the strength of the battery arranged accordingly.

2. The current should never be made so strong as to cause pain, or prolonged too long, but proportioned to the strength of the patient.

3. The poles must be placed first, and then the current introduced. Shocks and interruption of current should be avoided.

4. Repetitions of the operation must be done at intervals of *at least* fourteen days, or better four weeks.

5. Mild currents, continued and repeated, work better than strong currents, which, if given only through the metal, cause pain, and may destroy tissues, without curing the strictures.

This electrolytic procedure must not be confounded with galvano-caustic, which is used for the amputation of tumors, etc., and the immediate destruction of abnormal growths.

I cannot finish this paper without alluding to the valuable article of Dr. E. L. Keys, a gentleman well fitted for the investigation of this intricate question. The doctor has worked with skill and perseverance, and detailed his experiments with a clear precision and evident honesty of purpose. He reports in the *N. Y. Med. Journal*, December, 1871, among others, ten cases of stricture treated by electrolysis. I perused this report with pleasure, as I believe it is the first, if not the only one given in America, respecting the use of galvanism in strictures.

The author may possibly be too sanguine in his expectation, or too easily discouraged in consequence of these large expectations tempting him to condemn the method altogether, forgetting that a class of charity patients are the poorest kind from whom we can predicate the result of experimental treatment. Most of these are broken down in constitution, and from poverty and other causes incapable of aiding the cares and wishes of the physician. We cannot but observe in this report some very important complications that would have great weight at the time of treatment in characterizing the nature of the result obtained. For example, Case 2 was suffering from secondary syphilis; Case 6 had swollen testicle; 7, the urethra feels outside like a fibrous cord, and in Case 9, internal urethrotomy had been performed. Certainly all the conditions were unfavorable for a good result. Notwithstanding all this, the *résumé* of the ten cases ought to give satisfaction:

One unsuccessful—Case 9.

Five patients refused further treatment, and disappeared—Cases 1, 4, 6, 7, 8.

Four successful—Cases 2, 3, 5, 10.

Total, 10.

The only really unsuccessful case, 9, may be due to the former internal urethrotomy. Next, it is unjust to condemn the method, because five patients have disappeared, and could "not be followed sufficiently long to make such an observation valuable." And last, we find an undoubted success in four cases. In Case 2, notwithstanding the complication of syphilis, the stricture was dilated in *one* sitting from 9 to No. 12. In Case 3, from a filiform bougie the progress was made to No. 8, and in Cases 5 and 10, after treatment, sound No. 15 passed. Certainly a good result, and no reason to complain.

Considering all circumstances, I must profess myself well satisfied with the result obtained by the use of galvanism in strictures, and hope the profession will give more attention to the subject, and that many interesting reports may be given us, which will enable us to add so confidently important a remedial agent to our *repertoire*.

NEW YORK, 145 West Forty-Seventh Street.]

CARBOLIC ACID INHALATIONS IN CHRONIC BRONCHITIS.

By JOHN A. LIDELL, M.D.,

NEW YORK.

In a bad case of chronic bronchitis—a case in which there was strongly marked bronchiectasis on both sides, harassing cough both by day and night, profuse mucopurulent secretion that oftentimes was very offensive in smell, and emaciation with other general signs of bronchial phthisis, the writer has recently administered carbolic acid by inhalation, and made the patient comfortable by so doing, when every other palliative had failed.

At first it was given in the vapor of hot or warm water; but, after a short trial, these inhalations were discontinued, because they made the patient perspire too much. Then it was administered in the form of spray with Codman & Shurtleff's atomizing apparatus No 5, and the result was gratifying in every respect. The preparation which was used most consisted of the crystallized acid dissolved in water in the ratio of one grain of the former to one ounce of the latter, that is, 1 part

of the acid to 480 parts of water. Trials were also made with a solution as weak as 1 part to 600 on the one one hand, and as strong as 1 part to 300 on the other, but those having a strength of 1 part to 450 or 480 answered best. The patient was made to breathe or inhale the spray with deep inspirations, from five to ten minutes at a sitting, unless a feeling of drowsiness were sooner produced, once a day, usually; twice a day, however, when the expectoration was very profuse or offensive in smell.

The use of these inhalations was continued on and off for about eighteen months without producing any unpleasant consequences whatever. On the contrary they always gave the patient marked relief. They invariably soothed and quieted the cough. They corrected the fetor of the breath and of the expectoration. They lessened the quantity of the expectoration itself in a decided manner without tightening the cough or rendering it dry. And they proved beneficial in other respects, for under their use the pulse became less frequent and irritable, and the tendency to afternoon fever was likewise diminished. Notwithstanding, this case terminated fatally (although the end was long postponed), and therefore carbolic acid inhalations must not be considered as, in any sort of way, a specific for chronic bronchitis. However, our patient's life was obviously prolonged, and her comfort was greatly promoted by their frequent use. It is, then, as a palliative of more than ordinary value in the treatment of this disease that we now confidently recommend the inhalation of carbolic acid.

The only contraindication to its employment in chronic bronchitis which we observed, was the contraction of a "fresh cold," especially when attended with fine crepitation. Under such circumstances we always judged it expedient to suspend the inhalations until the acute symptoms had passed away. Carbolic acid appears to be too irritating in its nature to be used in this way with safety in cases where there is acute inflammation of the pulmonary tissue or of the bronchial mucous membrane. But, in cases where those chronic inflammatory conditions of the bronchial mucous membrane, which need a stimulating plan of treatment, are present, this agent may be administered in the way mentioned above, without risk, and with great benefit to the patient.

62 East Twelfth Street, New York, 1872.

Progress of Medical Science.

Physical Features of Insanity.—At the late meeting of the British Association for the Advancement of Science, Dr. T. B. Tuke remarked that he was not prepared to designate the individual part of the brain specially affected in the different forms of insanity, but generally the corpora striata are the portions most frequently found affected, and the cerebellum is the organ least frequently subjected to disease. The white matter is much more liable, in comparatively recent cases, to evident structural morbid change than the cortical substance; and where the intellect has been in abeyance for prolonged periods, the structure of the gray matter of the cerebral convolutions is difficult of demonstration, the layers are found indistinct, as the cells are few in number, and generally small in size. In the fifty-three cases of chronic insanity which he has examined, he has found distinct structural changes in the brain of each.

Cocoanut Milk.—The London *Pharmaceutical Journal* states, that in India the milk of the cocoanut is employed in debility and incipient phthisis as a substitute for cod oil, with excellent results. It is also used instead of cow's milk in tea and coffee. In large doses it acts as a substitute for castor oil.

Amputation of the Cervix Uteri.—This operation was first brought into prominence by Lisfranc, who operated ninety-nine times.

"Æthylidenchloride."—In a translation of an article in the *Berliner Klinische Wochenschrift*, Feb. 15, 1872 (*The Clinic*), the experience of Dr. A. Steffen, of the Children's Hospital at Stettin, with æthylidenchloride is mentioned. He says that its inhalation is effected just as simply as the inhalation of chloroform. Since it has a pleasanter and milder odor than chloroform, and does not irritate the skin to the same degree, children resist it much less; older children almost not at all. To attain the most rapid effect, as much as possible must be inhaled in the beginning. Children are rendered perfectly unconscious in two, at most, in three minutes. If the patients are not restless before inhalation, no acceleration of the heart's action is manifested, and as little is respiration affected. Patients present the appearance of a quiet sleep. The effect of æthylidenchloride is of shorter duration than that of chloroform. In operations requiring considerable time the anæsthetic must be re-inhaled as soon as signs of consciousness are manifested. In childhood, for operations of short duration, an average of three or four grammes (45–60 grs) is fully sufficient. As soon as the effect of the agent subsides the patient recovers rapidly without experiencing any inconvenience whatever. Children, as a rule, as soon as consciousness is restored, call for their dinner. Vomiting, during or after inhalation, occurs in children only in exceptional cases.

The Glue Bandage in Fractures.—E. D. Worthington, M.D., of Sherbrooke, Canada (*Canada Medical Journal*), in referring to the article on "The Glue Bandage as a Primary Setting for Fractured Limbs," published in the December number of that journal, by Geo. Ross, M.D., House-Surgeon to the Montreal General Hospital, states that he has used the glue bandage frequently and successfully since 1867, in fractures and in other surgical cases. In a case of fracture of the leg, with a certain amount of swelling, and where it is necessary to put it up for a few days in the usual manner, with a roller and in a box-splint, or on an inclined plane, the course he has always adopted in applying the glue bandage is as follows: dissolve a certain quantity of No. 1 white English glue to the consistence of drained honey. Get a small-sized paint brush, half or three-quarter inch diameter, and a smooth board two or three feet in length, on which to give the paper—already cut to the requisite lengths—a coating of glue. Now split the roller that is already on the leg down the middle, open the ends out, give the leg a good coating of glue, brushing under both sides as far as possible, and readjust the cut ends of the roller as you would an ordinary tailed bandage. With a little pains the whole leg may be glued, except at the heel and calf, and even at the latter point only a very narrow line need be left untouched. Then apply in succession layers of paper previously glued, and as each layer is completed give the whole a liberal covering of glue. In five or six hours this will have become perfectly solid. All this time the leg remains in the original splint unmoved. The box-splint of course has or ought to have movable slides. At the next visit lift the leg out of the box-splint, and apply a few thick-

nesses of glued paper, to cover the unglued line on the poster or aspect of the leg. In this way no assistant is needed, and the whole thing is done without the slightest possibility of disturbance to the fracture.

When necessary to split the bandage, an ivory paper cutter will be found very useful, cutting down on it with a sharp knife.

Sutures Discarded in Removal of the Breast.—According to the *Canada Medical Journal*, sutures are altogether discarded in the Brompton Cancer Hospital, London, in cases of removal of the breast, the edges of the wound being brought together by adhesive plaster. No carbolic acid is used as a dressing, but a mere spirit lotion, which answers equally as well.

Amyloid Disease Prevented by Alkalies.—James Perrigo, M.D., London, correspondent of the *Canada Medical Journal*, writes that Dr. Dickinson, of the Great Ormond street Children's Hospital, is a great believer in the theory that alkalies can prevent amyloid disease in long-continued suppuration. This is in the face of opinions recently held, of alkalies long administered causing anæmia by lessening the number of red corpuscles. A case was shown on the surgical side, suffering from a suppurating hip-joint, where the patient had been taking citrate of potash for eighteen months, and no amyloid disease was present.

The Uses of the Uvula.—In an important paper on this subject, by Sir G. Duncan Gibb, Bart., M.D., LL.D. (*London Lancet*), his conclusions are as follows: —1st. It acts as a sentinel to the fauces in exciting the act of deglutition when anything has to be swallowed. 2d. It compresses the soft palate, and holds its posterior free border firmly against the wall of the pharynx in deglutition, so that nothing can pass upwards. 3d. It modifies speech in the production of loud declamation and the guttural forms of language, by lessening or diminishing the pharyngo-nasal passage, when it acts as an elevator. 4th. Its elevating power is increased to the most extreme degree in the highest ranges of the singing voice, and is very moderately exerted in the lower ranges. 5th. Therefore, in its uses, deglutition and vocalization are the functions that are intimately associated with the uvula, and both become impaired more or less if it is destroyed, wholly removed, or seriously injured.

Management of Persistent Hiccough.—Dr. Emory L. Willard (*Pacific Med. and Surg. Journal*), relates three cases of violent and persistent hiccough, which were relieved by inhalation of the salts of white hellebore. The hiccough stopped as soon as the new action was set up by the remedy.

The Principal Causes of Insanity in California. —Dr. Henry Gibbons, of California (*Pacific Med. and Surg. Journal*), in his researches on "Insanity and Disease in California," enumerates the following principal causes of insanity in that State:—1st. The general character of a people who have left their homes to colonize a distant country. Such persons are not an average of the race. Discontented, restless, enterprising, and ambitious, they combine the elements of character prone to mental aberration. 2d. Absence from home, and the want of domestic and family ties, to give repose and relief to body and mind. 3d. Neglect of accustomed religious observances, and failure to cultivate, as of old, the religious sentiment which would serve as ballast in the storms of life. 4th. The want of fixedness—the idea that this is but a temporary home, creating the sensation of being adrift in the world. 5th. Nostalgia—longing for the old home, the fatherland, the scenes of childhood and the objects of early attachment. 6th. The eager pursuit of wealth as the chief end of life, and the entire absence of contentment, whether fortune smiles or frowns. Men are miserable unless they are making and hoarding money. 7th. Reverses of fortune; alas, how frequent! 8th. Absence of all moral restraints to which persons have been amenable in the old and staid communities where they have resided. 9th. Constant excitement, keeping up unbending nervous tension. 10th. Unbridled indulgence of animal passions. 11th. Self-abuse, incident to excess of male population. 12th. Imaginary diseases, fostered by the advertisements of villanous quacks in the newspapers. 13th. Practical ignorance of the value of cold water as a beverage.

Nitrite of Amyl in Epilepsy.—Two cases of epilepsy with distinct aura or other form of warning symptom, relieved by the inhalation of nitrite of amyl, are reported by S. Weir Mitchell, M.D., in the *Phila. Med. Times*.

He states that in another class of rare cases it may also prove of service. There are certain epilepsies in which the spasms last four hours, one fit following another. In these he commonly employs with success injections under the skin of bromide of lithium, using thirty or forty grains in three or four localities; but he has twice checked these attacks at once by inhalations of the nitrite of amyl. In one of them there was a second fit, but no more, which was unusual. In the other, which lasted always several hours, the nitrite was used at the close of an hour in the third convulsion. Relaxation instantly occurred; the fit passed off, and no other followed. Ether has been frequently employed in this case, but it merely mitigates the attack, and its use has to be kept up for two hours.

Primary Cancer of Bladder.—John Ashhurst, Jr., M.D., Phila., Pa. (*Phila. Med. Times*), relates a case of primary cancer of the bladder; the patient being an Irishman, forty-five years of age, and by occupation an engineer. Apart from the rarity of cancer of the bladder occurring as a primary affection, the case presented the subjoined clinical and pathological features of interest.

1st. The absence of pain during the latter stages of the affection, and the entire freedom from hæmaturia, both unusual, were explained by the fact, revealed at the post-mortem examination, that there was no ulceration of the mucous surface of the bladder.

2d. The rapid development and great intensity of the so-called "cancerous cachexia," in connection with the occurrence of pulmonary disease, which was not cancerous, were of interest—illustrating the fact that this cachexia depended rather upon the implication of vital organs than upon the extent and duration of cancer as a special form of new growth; the "cancerous cachexia" is not particularly well marked in cases of uncomplicated cancer of the bladder.

3d. The rapid course of the affection, and its early termination in death before the vesical growth had advanced to the stage of ulceration, were evidently owing to the condition of the lungs—the fatal issue being in fact due to pulmonary disease, and not to vesical cancer.

Is Quinine a Uterine Motor Stimulant?—Dr. T. J. Eaton, Baldwin City, Kan. (*Kansas City Med. Journal*), mentions three cases confirmatory of this query, which has been of late much discussed at home and abroad, since M. Monteverdi set forth his views in regard to the action of quinine on the uterus.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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WHY IS IT THAT THE AMERICAN MEDICAL ASSOCIATION SO MISREPRESENTS THE AMERICAN MEDICAL PROFESSION?

The people at large regard all national bodies as the mouthpieces of the special interests which they profess to represent. The utterances of the Methodist Conference, and of the Presbyterian Synod are taken as the voice of the Methodist and Presbyterian denominations; and on the same principle the resolutions of the American Medical Association are telegraphed over the country as the expression of the views of the physicians of America. They are quoted and deservedly criticised in the lay papers, to the disgrace of American science, and of the science of medicine all over the world; and for years our profession has suffered in the eyes of all intelligent and honorable citizens from the ignorance, the narrowness, the recklessness, and the Titanic stupidity that of late years, at least, has pretty uniformly characterized the public utterances of this Association. In the eyes of the world, the profession is, through the acts of this Body, made to appear as a colossus of old fogyism—a vast museum of medical antiquities, at which men look and wonder, and then thank God that they live in the nineteenth century. Every time the Association meets humanity groans, science bows her head, and the dial of civilization turns backward on the sky.

Instead of abusing the Association, we propose here to give an explanation of the fact that it so fearfully misrepresents American science and modern civilization.

The delegates attend the meetings of the Association for the sake of having a delightful social time, and very few of them give any attention to its business management.

In societies of all kinds—literary and scientific—it is found very hard to combine the literary, social, and business elements, so that all may move on actively and harmoniously. This difficulty is especially great when the organizations are large, and meet each time in strange and interesting places, that distract the mind from the real purposes of the Association.

The majority of the delegates to the American Medical Association have too good a time to work on committees or study over resolutions, or even to cast their vote on any important measure.

This explains also the meagreness of the scientific contributions of the Association. One might as well stand up to read a paper in the large hall of the Fifth Avenue Hotel, or at the corner of Fulton Street and Broadway, or before the passengers jumping on board of the ferryboats as in the section rooms of the American Medical Association.

The Session of the Association is so short that it is absolutely impossible to settle difficult questions. The Methodist conference devotes weeks to the general business matters of the denomination, and its decisions, whether wise or unwise, represent the sentiments of the Methodists of the country. At Philadelphia three or four mornings only were given to the discussion of subjects that can only be well investigated by committees with large leisure and abundant opportunities. The consequence was that nearly everything was decided at random, or else in accordance with the wishes of some prominent member. So far as getting the average views of the profession was concerned, the President might just as well have tossed up a penny, crying "heads or tails," as each resolution or report was read to the Association. Questions of vast complexity and supreme moment; questions that for ages have tasked the brains of civilization; questions that are now convulsing the nations of Europe and America, and threatening the disruption or renovation of society, —questions which, if the Association had the slightest influence with the profession, would, according to the manner of their decision, exalt us to the skies, or forever condemn us before a Christian community, were there decided with the rapidity and recklessness of a school-boy debating society. An ordinary dice-box would get the average views of the profession on great professional issues better by far than the morning sessions of the American Medical Association.

If a resolution to present Queen Victoria with a million sterling, or to erect a monument to George Francis Train, or to burn the city of Philadelphia, or to rule the Almighty out of the Universe, had been rapidly proposed by a prominent member, it might have been carried by acclamation.

The business affairs of the Association are almost entirely controlled by one man—Dr. N. S. Davis, of Chicago. This is a natural result of the other causes we have just mentioned. It is always so with large public assemblies composed of men who have little taste for, or experience in, political management. The

scientific men in our profession do not, as a body, love politics or wire-pulling, and they instinctively leave such matters to those who do like them.

To Dr. Davis, more than to any one man, more indeed than to any number of men, the Association is indebted for whatever of evil or of good it has accomplished. A natural and practised speaker, with a talent and taste for business management that is quite rare among physicians, he has from the foundation of the Association been one of its leading spirits, and now almost entirely controls it. A large proportion of the delegates are utterly ignorant of the rules of the Association, and are utterly indifferent to its business management; while Dr. Davis is exhaustively familiar with every fact of the Association from its birth until now, and is thoroughly enthusiastic for its welfare; has indeed made this matter a specialty of his life. The delegates who vote at all find it easier to vote with Dr. Davis, whom they suppose to know more than any other man about any subject that is presented, than to study it up for themselves, and hence it happens that we have the strange spectacle of a thousand men—the best representatives of the medical profession in America—yielding to one-man power with the most absolute satisfaction and unconcern. If Dr. Davis had gone *alone* into the hall at Philadelphia, made himself chairman, secretary, and treasurer of the Association; if he had proposed and seconded and voted on all the resolutions, the final result would have been just about as it was with a thousand men around him. It was on the Friday morning session that the relation of Dr. Davis to the Association appeared most conspicuous. The order of business was the disposal of the business on the secretary's table. The secretary began to read the resolutions that had been handed him, and to make motions concerning the publication or non-publication of papers. Then there followed an exhibition the like of which eye hath not seen nor ear heard, neither hath it entered into the heart of man to conceive—an exhibition which probably is without a parallel in the history of public conventions. Dr. Davis, who had taken a seat near the pulpit, eagerly watched every resolution as it was read, and every motion that was made, and successively disposed of them according to his own wish. Other members made motions to table, to reconsider, or to do this or that, but nothing was finally settled contrary to Davis' wishes. Other voices were heard from near and from far in feeble protest, but all were drowned in this one voice. Meanwhile from every part of the church, from the pulpit, and from the vestibule, men were seen rushing to Davis, and in tones of humility and reverence, such as are supposed to be appropriate for those who address the Almighty—were craving his permission to make or to modify resolutions, to insert this or take out that, as though all well knew that it would be useless to attempt to carry any measure to which he was opposed. The king received his subjects with mingled firmness and gentleness, as every good ruler should; some were favorably answered, others doubtfully, and others were sent empty away, sad and discouraged. We give one illustration out of many that might be given. When Dr. Reese's carefully worded resolution in regard to woman was brought up, a few prominent members seemed to be disturbed lest the Association might again disgrace itself and the country on this subject, and there appeared to be quite a general feeling that perhaps it might not be impossible to redeem the bad record of the past quarter of a century. Then arose Dr. Davis, and half jestingly said that he "preferred to talk with the ladies in Fairmount Park than talk about them here," and at once, in the twinkling of an eye, the representatives of forty thousand educated physicians said Amen!

In short, Dr. Davis was the Association. It was a strange, a sublime, a picturesque sight—this voluntary, unanimous, unswerving and unconscious yielding of a thousand wills to one.

If there was any single measure of the Association at the meeting that was at all displeasing to Dr. Davis, he has only himself to blame; he had only to breathe a wish, and it was his.

These words are not in censure of Dr. Davis; they are rather in his praise. But for his watchfulness, care, and supreme influence, the Association might have passed we know not how many absurd resolutions.

Now it would be very difficult for any one man to fully represent the views of the leading minds of the profession in this country on all the great questions that arise; and Dr. Davis is certainly not the man, for on the woman question, and on certain matters of ethics, he no more represents the best physicians of America, than Dr. Martyn Paine's work on Materialism represents Modern Science. He has a perfect right to his views. He has as much right to worship the eighteenth century as we have to worship the nineteenth. If a man takes pride in being a quarter of a century behind the age, there is no law to interfere with him. He has a legal, though scarcely a scientific or moral right to Bourbonize the American Medical Association; and if the members of the Association allow themselves to vote for wicked and cruel and iniquitous measures, that would disgrace the lowest order of politicians, they must bear at least a part of the blame.

It is not our purpose here to find fault, but to explain what to many has been a great mystery, the failure of the American Medical Association to represent the American Medical profession.

We close with these suggestions. First, let the meetings of the Association be held with closed doors. What would be thought if all the petty squabbles of our county societies were regularly published in the newspapers, so that the world could know by heart every blunder that we make? Why should the vaster, more important, and annually recurring blunders of the American Medical Association be made the property of

the laity and advertised over the land to our perpetual shame? Our friend President Yandell, in his closing address, said that the session "had inspired the spectators in the gallery with a higher respect for the profession in America." Now we venture to say, that if the few straggling spectators in the gallery had brains enough to be inspired with anything, it was with a *lower* respect for the Medical profession in America; and their feelings must have been shared by all intelligent readers of newspapers.*

Secondly, as far as possible re-elect delegates so that the Association shall comprise men who know something of its history, rules, and management.

Thirdly, banish to everlasting darkness that mass of useless lumber called the Transactions, and all discussions about them, and let the papers that are worth anything be published, in the same century in which they were written, and where they will be read by somebody besides the Permanent Secretary.

Fourthly, Let all the important work of the Association be done by *large committees fairly chosen.*

A body of a thousand men cannot determine complicated questions in a breath; there is a need of the study, and care, and reading, and conference, and time that only a committee can give.

The charge has been made that the committee on ethics, that has made so much trouble in the country and has done so much dishonor to our profession and our country before the world, is a *packed* committee. We have no evidence of the truth of this charge; but hereafter let the committees be chosen in such a way that no similar charge can be entertained.

Let these suggestions be carried out, and the American Medical Association may become a power instead of a farce in the profession. Its suggestions will be received with respect even when they are not adopted, and it will elevate instead of degrading the science of America.

To the laity we would be glad to say, if our voice could reach them, that when the woman question is fairly and squarely brought before the American Medical Association it will probably be decided in accordance with the demands of reason, of common sense, of modern science, and of a Christian civilization. During the session at Philadelphia, and since, the question has been seriously and earnestly raised whether the demands of science do not call for a new Association composed of scientific men, to represent the age in which we live. It may yet come to that: but would it not first be well for those physicians who have made the profession what it is in America, who by their writings, their discoveries, their learning and their personal character, have honored their country and themselves, and who have been hitherto kept aloof from the Association—would it not be well for these men, whose names will occur to all of us, to make one calm, determined, and united effort to redeem the soiled fame of our profession, and lift the present American Medical Association out of the eighteenth century into the nineteenth?

* A few years ago, when the Association met in New Haven, a resident of that city, a calm, wise, and judicious man, who had no prejudice against science or our profession, a man in no way cynical, but thoroughly genial as well as scholarly, and who had heard and read the debates in the morning sessions, made this remark, "*The American Medical Association is the greatest of all humbugs.*"

Reviews and Notices of Books.

A Treatise on Diseases of the Bones. By Thomas M. Markoe, M.D. New York: D. Appleton & Co., 1872.

The work of Dr. Markoe, which has been so long announced, has appeared, and has had, as it merits, a very careful perusal. The author dedicates his work to his colleagues of the New York Hospital, from the records of which we find that he has taken numerous cases.

In the author's preface we are informed that private and public professional engagements must be accepted as an apology for any deficiencies in the scientific studies of the subject. Of course the profession have a right to expect from those who profess to give information on a subject with which they claim to be conversant, all the facts relating to it; and whether such apology can be accepted in reference to the present work will depend altogether upon the taste or individual want of the reader.

As the work of a practical and observant surgeon, it is replete with information that can only prove instructive to practitioners. The sources from whence that information has been gleaned have been well selected, and many of the cases are of such a highly interesting character that in their perusal the reader journeys through the four hundred pages much more pleasantly than he usually does in works of kindred topics.

Chapter I., Part I., devotes six pages to hypertrophy and atrophy. It contains some practical suggestions regarding the danger of using the long bones as levers in reducing old dislocations. From disuse such bones have undergone or are in a condition of atrophy, and are easily fractured by rude manipulations.

Chapter II. treats of inflammation of bone, in eight pages, and is occupied exclusively with those processes that result in organization of inflammatory products. It contains nothing in addition to the original observations of Barwell and Foilin.

Chapter III.—Suppuration of Bone.—First, the circumscribed form, occurring almost exclusively in the cancellous structure, is illustrated by cases occurring in the service of the New York Hospital; second, a variety described by the author under the head of sinuous abscess of bone, in which the products of inflammation reach the surface by a number of more or less tortuous channels. The treatment which suggests itself consists in laying the central cavity and all the sinuses freely open, the result depending on the thoroughness with which it is done.

Diffuse inflammation of bone, or osteo-myelitis, contains the observations of Dr. Lidell, and remarks upon the preparation from an acute case presented to the Pathological Society by Professor H. B. Sands.

Rickets, being a disease comparatively rare on this side the Atlantic, the remarks have been compiled from the special treatises of Jenner, Alex. Shaw, and Jacobi.

The subject of tubercular disease is cautiously handled. It is well known that the most eminent pathologists of the present day are at variance as to its frequency in bone tissue; some denying its existence altogether, others admitting it as a rare affection, occasionally primary, more frequently secondary, to a pre-existing ostitis. We think the author wisely evades an attempt at solution of the problem. Passing, however, from this debatable ground, he enters a domain where the practical surgeon is more at home, and the subject of caries is exhaustively treated. In the treatment of those inflammatory symptoms which precede molecular death, in those cases in which there is a degree of healthy reaction, as evidenced by a moderate degree of pain and tenderness, the author is an advocate for the administration of mercurials in alterative doses. Some good practical remarks are made on the atrophy, with its associated degeneration, on the evil results of too prolonged rest, on the early use of passive motion, and the indications for persistence in its use.

Necrosis has evidently been a favorite study. Nearly one hundred pages are devoted to it exclusively. Predisposing causes referred to are—1. Exposure to wet and cold. 2. Injury. 3. Mercury. 4. Phosphorus. 5. Syphilis. 6. Fevers.

In a study of the pathological conditions, reference is made to the researches on regeneration of bone by Ollier and Marmy, of Lyons, and Hein, of Dantzic; and in the article on phosphor-necrosis contributions are taken from Heyfelder, von Bibra, and Geist. The symptoms which characterize the different stages of necrosis are studied as—1. The period of inflammation by which the necrosis is originally produced; 2. The period of sequestration, during which the separation is proceeding, and the involucrum being formed; and, 3. The period of retention, during which the sequestrum remains as a foreign body within the involucrum.

Some very interesting cases are reported of that very formidable class of accidents that occasionally occur in the history of necrosis involving the lower end of the femur; we allude to laceration of the popliteal artery by contact with ragged edges of emigrating exfoliations or sequestra.

The article on tubular sequestra following amputations is very complete, and contains the author's observations as to these necroses being caused by the division of the nutrient artery of the bone by the saw or knife.

Part II. is devoted to tumors of bone. The article on cartilaginous growths is concise. It is illustrated by woodcuts from Paget, and, in fact, the microscopic anatomy is principally from that author. The clinical history is illustrated by some cases of tumors growing from the hand and foot, and by Van Buren's case of recurring osteo-chondroma of the thigh.

In the chapter on fibrous tumors we have the history of a very remarkable case of spindle, called fibroid, growing from the transverse process of one of the cervical vertebræ. It returned after two operations, and in the third it was traced into the spinal canal. After its removal a portion of the fibrous investment of the cord was left bare and exposed. The patient made a good recovery, not only from the operation, but also from paralysis, produced by the pressure of the growth on the cord.

Tumors of the jaws are treated of together, and the article is a complete exposition of all that is known on that interesting subject. It occupies thirty-four pages treating of dentigerous cysts, fibrous, fibro-cystic, and fibro-plastic or myeloid growths. We think that here, as elsewhere through his book, Dr. Markoe has given undue prominence to foreign authors. Much as we admire the writings of Paget, Billroth, Sankey, and others, we do not think it just that the labors of our own surgeons should be entirely ignored. The operations of Dr. Carnochan on the lower jaw, the subperiosteal resections of Dr. Jas. R. Wood, are not alluded to, and, we think, ought to have had a place in a work which may be studied as an exponent of this department of American surgery.

Part III. concludes the volume, devoting about eighty pages to malignant diseases of bone. In chapter II. are some interesting clinical histories of cases of soft cancer.

In the article on melanoid cancer is reported Dr. Simrock's remarkable case, where melanotic deposits were found in all the tissues, hard and soft alike.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 24, 1872.

Dr. A. L. Loomis, President, in the Chair.

Dr. Blake presented a typical case of compound comminuted fracture of the tibia, produced by railroad injury. Amputation was performed at the knee-joint by Dr. Hunter.

Dr. Rodenstein presented specimens removed from the body of *Calvin H. Hubbell*, native of Massachusetts, forty-five years of age, admitted to the Home for Incurables on the 8th of July, and died on the 13th of July, 1871. Fourteen years before, he had been seriously ill. The late Dr. Watts diagnosticated Bright's disease. He had general œdema, convulsions, and coma. His friends believed him at one time to have died, and laid him out in a shroud. He revived from apparent death, and slowly recovered his health. Since that time, until February of last year, he did not recollect that he was even ill enough to stay at home for more than one or two days. He had noticed that his feet swelled occasionally. During the preceding winter he felt a lump in the left side of the abdomen. He lost flesh and became weak. In February he entered St. Luke's Hospital, and stayed there until July.

He came under my observation with the diagnosis of cancer of the spleen.

There was a dirty, clavish hue of the skin, not unlike the cachectic look of chronic malarial disease. His appetite was good, and he was particular about his food, and especially about his drinks. He suffered at the time from diarrhœa.

On examination a hard mass could be felt, which extended to the median line, and from the free borders of the ribs down to the crest of the ilium. It felt smooth and firm, except in the region where a distinct depression could be felt. On percussion the region of dulness could be followed to the third intercostal space. On the right side there was also considerable increase to the normal dulness over the region of the liver. The heart sound could be most distinctly heard below and outside of the right nipple. There was no pain nor tenderness on pressure anywhere. He did not complain of dyspnœa; his pulse was 72 per min., and regular; his respiration 40; temperature, 99½° Fah.

No urine was obtained for examination. He insisted that what urine he passed came through the rectum. I was anxious to study a case of leuchæmia, and thought this might prove such, but the examination of the blood

furnished negative results. There was no history of malaria or typhus intoxication. I did not see sufficient symptoms for cancer. Before I arrived at a diagnosis my patient died.

Rigor mortis well marked; body extremely emaciated. The scrotum was very much distended, but empty and flabby. There was prolapsus ani, and blood flowing out of the rectum.

On opening the chest the left pleural cavity was found filled with fluid, and the lung pushed up and compressed, but no perceptible pathological changes. The right pleural cavity also contained fluid; it was not measured. The thoracic walls were thickly covered with layers of false membrane; the heart was on the right of the median line. The pericardium contained an ounce of water; there were patches of pseudo-membrane on the right ventricle, and a clot in right auricle. The heart weighed thirteen ounces. There were concretions in the aortic valves, and deposits of probably inflammatory material upon the walls of the artery.

On opening the abdomen the intestines were found strongly adherent to the abdominal walls. They could not be separated without tearing. To reach the other viscera, they had to be dissected out with the knife.

The spleen was found very much enlarged; it weighed two pounds thirteen ounces, and was encapsuled by a thick mass of fibrinous material, probably of inflammatory origin, which had partially undergone calcification or ossification; the vessels were very much dilated, and had also become calcified. The liver was of normal size and structure, except that its serous covering was very much thickened, and contained, on the anterior aspect of the right lobe, a hardened mass of adventitious tissue, also converted into stone or bone. The rectum was imbedded in a mass of false membrane, and behind it was found another calcified mass; the sigmoid flexure was found in the median line, and the bladder was drawn to the left side, and occupied the place of the lower bowel. The pancreas had also been forced from its position, and the head of the pancreas was found agglutinated to the fourth lumbar vertebræ.

The kidneys were in their normal position. The right weighed five ounces, the left four ounces two drachms. The capsule was adherent. On their convex surface they presented a series of cysts. On opening the organ it was found in a state of advanced degeneration. The connective tissue was considerably increased; many of the tubules are bereft of epithelium and compressed. Many of the glomeruli have become obliterated. The cysts, which seem confined to the cortical substance, appear to have been formed at the expense of the malpighian capsules. In some sections of the microscope it can be seen that several of the malpighian bodies have coalesced to form cysts; these vary in size from minute microscopic forms to that of a walnut; they were filled in the fresh state with a mottled yellowish-brown semi-solid substance, probably of hemorrhagic origin.

RARE MODE OF DEATH IN INFANTS.

Dr. Janeway exhibited a specimen of some interest as illustrating a rather rare mode of death in infants. The infant died at the age of two days, in Bellevue Hospital. The mother had a very protracted labor, the first stage being twenty-six and a half hours. The child did well for the first twenty-four hours, at the end of which time it grew pale, passed no water, and in the course of the day died.

At the autopsy the peritoneal cavity contained eight ounces of thick, black fluid blood, which had its source in a detachment of the peritoneum from the upper part of the right lobe of the liver. The area of detachment was two by two inches. All the other organs were normal. The kidneys contained urates in the tubes as usual.

This was the third specimen of the sort which he had seen, and as far as he recollected, in both the other two the labor was protracted. This was, however, the only one in which the effusion was upon the upper surface of the organ.

FURROWED LIVER.

He next exhibited a furrowed liver removed from a man who died in Bellevue Hospital, of intense congestion and œdema of the lungs shortly after admission, he having been taken from the water almost in collapse. The furrow of the organ was discovered to be the result of obstruction of the portal vein in that immediate vicinity, partly from obstruction of the contiguous bile duct, and partly from inflammatory deposits. The liver tissue involved was found to be subject to fatty degeneration.

ACUTE PERITONITIS IN A CHILD.

Dr. Lewis Smith presented the liver of a child covered with fibrinous exudation, the result of an acute attack of peritonitis. The infant, aged one month, appeared well until four days before its death, when it was observed to be in a good deal of pain, attended with vomiting and constipation.

The intestines were covered with the exudation, and were extensively agglutinated. There seemed to be no assignable cause for this peritonitis, except the fact of the existence in the wards of puerperal peritonitis.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 16, 1872.

Dr. E. R. Peaslee, President, in the Chair.

At the request of the President, Dr. Purple, Vice-sident, gave an interesting account of the proceedings of the late meeting of the American Medical Association in Philadelphia.

Dr. A. C. Post spoke of a case of hip-joint amputation, which he saw performed at the Pennsylvania Hospital, by Dr. Addinell Hewson, in which the hemorrhage was entirely controlled by torsion, with the exception of one acupressure needle in the femoral vein. The operation was performed with as much deliberation as in operations of the fore-arm or lower extremity.

The President read a letter from Dr. Samuel M. Oxford, of Flint, Michigan, reporting the cure of two cases of hydrophobia by the use of opium and castoreum. The latter was given in half drachm doses once in three or four hours.

He also exhibited a specimen of mammary fibroma, measuring about four inches in length, three in width, and two in depth, which he had removed from a patient a few hours previously.

The Secretary acknowledged the reception of copies of the Edinburgh Medical Journal, and Catalogue of Museum of Comparative Zoology at Harvard University, Cambridge, Mass.

Dr. George M. Beard then read a valuable paper on "Recent Researches in Electro-Therapeutics," including the First Annual Report of the Electro-Therapeutical Department of Demilt Dispensary, of which the following are the chief points:

After alluding to the establishment of an electro-therapeutical department in the Demilt Dispensary, by the trustees, with a liberality that cannot be too highly commended, and with an enthusiasm for science that is exceedingly rare among business men, he said that

one object in establishing it was to afford opportunity for experiment.—It was his desire not only to treat cases for which electricity had been *proved* to be beneficial by past experiences, but all diseases from any of the departments that might be sent in, paying no regard whatever to any merely theoretical reasoning on the subject. Although the text on which his discourse was founded is contained in the report of this institution, yet he took occasion to supplement his remarks by experience gained in private practice, as well as in other public institutions of the city.

Hysteria and Allied Affections.—One case of neurasthenia, with a full pulse of 115, was greatly improved by general faradization. A case of hysterical mania, in a woman aged 55, of six months' standing, was so much benefited by general faradization alone, that after the tenth application she seemed to be entirely restored; but she soon relapsed, and treatment by general faradization was again employed. Under this she made progress but slowly, and galvanization of the brain and sympathetic brought her up to pretty nearly the standard of health. After that she was lost sight of. Cases of globus hystericus, melancholia, and chlorosis were greatly benefited by faradization.

It is a noteworthy fact that while neurasthenia, neuralgia, chlorosis, and many other of the affections allied to hysteria are more frequent among the higher orders, *hysteria* itself is, perhaps, quite as common among the ignorant or servant-girl class, in whom the emotional nature reigns pretty nearly supreme, unchecked by reason, or education, or common sense.

Cases of hypochondriac and melancholic insanity have been treated by central galvanization, or by single galvanization of the brain, and sometimes by general faradization, with results that warrant electricians to persevere.

Neuralgia.—The statements made by authors of ability, that the faradic current is useless in neuralgia, is contradicted by the experience of thousands of physicians in this country, who are every day relieving or curing cases of true neuralgia, of a central origin, by faradization alone.

Rheumatism.—Of the various methods of application employed for rheumatism, general faradization seemed to accomplish more than localized galvanization of the joints, and very much more than central galvanization. It favorably affects rheumatism in several ways: 1st. By the relief of the local manifestations. 2d. By its stimulating tonic influences over the whole system. 3d. By modification of the urinary secretion. Muscular rheumatism is the type that gives way most readily to electrical treatment; next to that the subacute articular variety offers the best chance of benefit.

Dyspepsia.—Very few diseases yield so surely to any remedy, as nervous dyspepsia yields to electrization. In six cases treated by general faradization, galvanization of the sympathetic, pneumogastric, and central galvanization, five recovered and one was improved.

Bronchitis.—None of the cases were perfectly cured, and those complicated with phthisis will probably die. Yet the electrical treatment of phthisis was not wholly a failure when the mild galvanic current was applied through the diseased region, with a view to absorption.

Asthma.—Two cases were treated. In one, a recent case, the woman was apparently cured. In the other, chronic, the man, although when first seen could not walk half a block without causing a feeling of suffocation, under a *séance* of five minutes, experienced such positive relief that he was able to walk home a distance of one mile.

Intermittent Fever.—Electrization was ordered in three cases as a general stimulating tonic, in order to improve the nutrition. Under general faradization and galvanization of spine and sympathetic, one case was apparently cured. Another was so much influenced by general faradization, that the attacks, which had been daily, came on only every fourth day. The other case was abandoned after the first application.

These cases confirm what Dr. Rockwell and the author had previously accomplished in private practice.

Spinal Congestion.—Electricity helps spinal congestion not so much by directly reducing the amount of blood in the chord, as by improving the nutrition of the part. Of five cases, two were much benefited, two were relieved, and one was cured.

Spinal Irritation.—This affection, pure and simple, is not so often seen in public institutions as in the higher orders of society. There is no difference in the therapeutical effects of ascending and descending currents in treating cases of spinal irritation or congestion, as noticed in private and hospital practice.

In one case of spinal irritation treated in dispensary, there was much improvement under central galvanization and counter-irritation to the spine.

Locomotor Ataxia.—One case was treated with slight improvement. In regard to this disease there are two considerations of great importance. First, that cases of single spinal congestion or irritation are frequently called locomotor ataxia; and secondly, that when the process of degeneration of the posterior columns of the cord has actually set in, with the necessary bodily symptoms that accompany such degeneration, perfect recovery is very rare under electrical or other treatment.

In Europe, and especially in Germany, the so-called functional or milder disorders of the nervous system are much less frequent than in this country; and hence they are not prepared for them when they see them, and are apt either to ignore or mistake them. In the recent German works, and in some of the medical journals, cases of spinal congestion of a not very severe form are gravely reported as cured by hydro-therapeutics, or electro-therapeutics, or by nitrate of silver.

Disease of the Eye.—A case of diplopia, resulting from paralysis of the trochlearis muscle, according to Dr. Derby, who sent him to the electro-therapeutical department, began at once to improve under localized galvanization, and after twelve *séances* was cured. A case of paralysis of the motor oculi, congenital, with only the power to distinguish light from darkness remaining, was so far benefited, that the patient could distinguish such objects as a knife or watch at a distance of four feet.

Disease of the Skin.—What has been learned in the treatment of these diseases, in this Dispensary, is itself a sufficient reward for all the labor from the beginning until now. An opportunity has been given of testing the various methods of application in a department which now promises to be, and is one of the most attractive and satisfactory of all the special branches of electro-therapeutics. In Demilt Dispensary eleven cases were treated; six cases of chronic eczema; one of psoriasis; one of erysipelas; one of syphilitic tubercle; one of favus; and one of ulcer. All of the cases of eczema that persevered were benefited or entirely cured, though relapses occurred in some cases. The case of psoriasis did not persevere. The case of favus was not benefited, and the ulcer was cured.

In central galvanization, the negative pole is applied to the epigastrium (the patient holding it by an insulated electrode), while the positive is applied over the head, along the sympathetic, and down the whole length of the spine in such a way as to bring the brain, the pneumogastric, the spinal cord, and also the prom-

inent plexuses of the sympathetic—indeed the whole central nervous system—under the influence of the galvanic current.

It differs from general faradization in that it is designed to affect only the central nervous system, while in general faradization a large part of the muscular surface of the body is acted on. In general faradization, the central nervous system is, of course, affected, but to a less degree than in central galvanization. The practical difference between the two currents—faradic and galvanic—is mainly a difference of degree; the same difference there is between bromide of potassium and hydrate of chloral—the faradic current being the bromide of potassium, the galvanic the hydrate of chloral. Bromide of potassium is a safer remedy than hydrate of chloral, fulfilling a wider range of indications, but then in very many cases it is powerless, and the hydrate of chloral acts as a specific; the faradic current being safer than the galvanic, is therefore better adapted for general use. In many cases, however, it fails, and the more powerful galvanic is demanded.

It is this superiority of degree that makes the effect of central galvanization so much more positive and curative than faradization, however administered; and in cases of nervous diseases of all kinds; and especially in gastralgia, angina pectoris, neurasthenia, spinal irritation, etc., it has been used with great effect; but it is very recently, during the past two or three months, that he has employed it in diseases of the skin—such as eczema, prurigo, and lichen.

Tumors.—Nine cases were treated: two cases of scirrhus of the breast; one of epithelioma of the lip; two of uterine fibroids; four of goitre, and one of cystic tumor. The goitres were all reduced in size more or less by the use of the needles, but as yet have not been entirely cured. Goitres do not rapidly disappear under electrolyzation; in many cases like fibroids and other tumors, they grow smaller under the treatment up to a certain point, when they hang fire and will not budge a unit farther. It is possible to destroy any tumor that is accessible by electrolysis, provided a sufficiently strong current and a sufficient time be given to it; but then the question must always arise whether the disease or the remedy is most to be dreaded.

The epithelioma of the lower lip was destroyed by a method of electrolyzation that he has recently employed, and calls *working up the base.* This method consists in inserting the needles around the tumor, and gently into the healthy tissue, so as to undermine it and cut off all communication between it and the healthy tissue. This method is followed by complete sloughing of the growth.

In regard to the general subject of cancer, the subjoined remarks were made:

1st. Electricity, however employed, is not a specific for cancer in any sense of the word. 2d. The electrical treatment, even electrolysis by the method of *working up the base,* as has been described, does *not* prevent the constitutional infection, in the later stages at least, and there is no room for believing that in the earlier stages it is more efficacious than the knife in preventing the subsequent infection of other parts of the body. 3d. Rapid and permanent absorption and atrophy of cancer after electrolysis, without sloughing, is an effect which is observed only in a small minority of cases. It does occur, however, in some cases, though not as yet in his own practice.

The advantages of electrolysis in the treatment of malignant tumors over other methods of treatment are these:

1st. It is attended with little or no hemorrhage. 2d. It causes less shock. 3d. Dr. A. B. Crosby, who has worked out with the writer many of the operations, is of the opinion that electrolysis closes the lymphatics, and thus prevents the absorption of pus. Dr. Byrne, of Brooklyn, who in the special department of uterine galvano-cautery has labored more successfully than any man in this or any other country, gives the same explanation. Although the author has operated very many times in the vagina and rectum, and although these operations were followed by profuse suppuration, yet no such bad result as pyæmia, peritonitis, or cellulitis has yet occurred. 4th. It usually relieves the pain of tumors and other accessory symptoms connected with them. This relief of the terrific pains connected with malignant tumors is sometimes very striking. This relief may be temporary or measurably permanent, and it may be obtained from single external applications. Tumors may be treated for this purpose by electricity, when an operation of any kind is contra-indicated. 5th. Electrolysis can be employed tentatively, experimentally, a little at a time, without any risk whatever. With the knife it is usually necessary, if the elegant phrase may be allowed in a scientific paper, to "go the whole hog." 6th. The healing process after electrolysis is more rapid and satisfactory than after the knife or the ligature. This is a fact of clinical observation. He has demonstrated it in tumors of a most malignant character. Tumors which have, after various operations, recurred immediately over and over again, have by electrolysis been held in check and made to heal wholly or in part; and cases of less malignancy seem to heal more kindly than after the knife.

Dr. Beard illustrated on the blackboard his manner of introducing the needles, also made drawings of four cases of malignant growth in which electrolysis had been employed.

In one case, under the care of Dr. Catlin, an erectile tumor on the forehead, of the size of an Isabella grape, was compressible in five minutes after the application, and in ten minutes it looked like a shrivelled grape with the skin fallen in.

A patient about 45 years old, with a large fibrous tumor of the neck, was introduced. The tentative operation by electrolysis had caused the tumor to go down one and a half inches in four or five weeks. The father of this patient, who resided at Rhinebeck, N. Y., also had an enormous fibrous tumor, and died on the operating table 40 years ago, while Dr. Valentine Mott was performing the operation. In the present patient the tumor was first noticed at the age of twelve years.

Dr. Wm. B. Neftel.—Mr. President: When the living organism is subjected to the action of an electric current, a variety of phenomena takes place simultaneously. But in order to study them carefully and with precision, it is necessary to use methods similar to those of other natural sciences, and examine these phenomena separately. Thus we study the action of the galvanic current upon the motor nerves isolated and separated from the system, and also in connection with it. In the same way we examine the effect of the current on the nervous centres, on the blood-vessels, etc. If we desire, for instance, to study the effect of the electrolytic treatment on morbid productions, it is useful and even necessary to investigate the influence of the current upon the tissues generally, upon their cellular elements, upon the protoplasm. The word Protoplasm was introduced by Remak to designate the cell-contents. Protoplasm is the living contractile substance, consists mostly of myosine (also of protagon

and glycogene), and exhibits vital manifestations of spontaneous motion, nutrition, growth and production of similar substance. The contractility of the protoplasm is of the greatest importance for the whole organism, as upon it depends the ciliary motion, the motion of the spermatozoa, the division of cells and their migration. We know from the researches of Recklinghausen, Colnheim, and others that protoplasmatic bodies, by means of their amœboid movement, can produce locomotion, emigrate through the intact walls of the blood-vessels, and traverse long distances. These vital phenomena can be observed under the microscope, if special arrangements are made (moist chamber, heated objective, etc.) We can then see that a certain temperature acts favorably on the protoplasmatic motion, which may be considered as a criterion of all the vital properties, and that a very high or a very low temperature are incompatible with life. Weak solutions of alkalies are favorable to the motion, but strong ones abolish it by dissolving the protoplasmatic structures. Acids, even weak solutions, retard this motion, and concentrated ones entirely arrest it by shrivelling or coagulating the cell-contents. Hydrogen and carbonic acid are poisons for the protoplasmatic bodies, by arresting their motion. A weak induced current increases the motion, a strong one arrests it; the cells assuming a globular shape, which, according to Kuhne, corresponds to their tetanus.

With reference to the action of the galvanic current on the protoplasm, Kuhne gives the following law of contraction:

Cathodic closing produces contraction, which increases to tetanus at the cathodic duration; no contraction at the cathodic opening.

Anodic closing and duration produce no contraction, which, however, is called forth at the anodic opening. This is analogous to the contraction-law of the motor-nerve and muscle.

Rollet has described the changes which the red blood-corpuscles undergo under the influence of the current. They first become mulberry-shaped, then globular and colorless, and in those of the amphibia the nucleus is driven out. It is evident therefore that the electric current exercises a most powerful action on the tissues generally. It may act favorably, or on the other hand it may completely destroy all the vital manifestations of the protoplasmatic structures. The action of the current is not limited to the vicinity of the electrodes, but extends to great distances, modifying or destroying the vital properties of the protoplasm.

On these histological observations I based the electrolytic treatment of malignant tumors, and after several years of patient investigation I am now fully convinced that they can be cured by this method. A considerable number of cases have demonstrated that even the most malignant tumors are of a local origin. This explains the fact that the organs primarily affected by carcinoma are those subjected to mechanical or chemical injuries: the lips, the tongue, the œsophagus, the stomach, the rectum, the testicle, the breast, the uterus, etc. The primary tumors remain for some time as a local affection, which only subsequently becomes generalized through the lymphatics and through the general circulation. Of course the easiest way to cure a tumor is in its first stage. In the constitutional stage of the disease we invariably find secondary deposits in the liver, kidneys, or lungs, but very seldom in the organs primarily affected. As a criterion of the generalization of the disease may be considered the affection of the liver, which is always accompanied by a considerable amount of indican in the urine. This coloring matter is easily detected by adding to a specimen of urine an equal quantity of concentrated hydrochloric acid, and treating it with a few drops of a saturated solution of chloride of lime. A dark precipitate is then formed, which under the microscope shows blue crystals of indican.

The President announced that Dr. E. R. Squibb, on June 6th, would speak of the actual merits of some of the remedies which have been recently introduced.

The Academy then adjourned.

Correspondence.

CEREBRO-SPINAL FEVER.

BUREAU OF RECORD OF VITAL STATISTICS,
HEALTH DEPARTMENT, No. 301 MOTT STREET,
NEW YORK, June 19, 1872.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—In your report of the discussion upon Cerebro-Spinal Fever, at the meeting of the Academy on May 2d, it is stated "according to Dr. Russel the duration of the disease in fatal cases has never been *more* than twenty-four hours." What I did state was, in answer to a question from Prof. Clark, that I did not *remember* any instance in which the duration of the disease had been *less* than twenty-four hours, with the exception of the cases in Eleventh Avenue referred to by Dr. Morris. I afterwards, however, discovered that my memory had been at fault—as up to that time three other such cases had been reported, and quite a number of others have since occurred. Yours very respectfully,

CHAS. P. RUSSEL, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 5, 1872, to June 18, 1872, inclusive.

STORROW, SAM'L A., Assistant Surgeon.—By S. O. 133, War Depart., A. G. O., June 10, 1872, to report in person to the Commanding General Department of the Lakes, for assignment to duty.

BROWN, H. E., Assistant Surgeon.—By S. O. 131, War Department, A. G. O., June 7, 1872, relieved from the operation of S. O. 118, C. S., A. G. O., and to report in person to the Surgeon-General for special instructions.

COUES, ELLIOTT, Assistant Surgeon.—By S. O. 130, War Department, A. G. O., June 6, 1872, the order directing him to report to the Commanding General Department of Dakota, is suspended for four months.

LAUDERDALE, J. V., Assistant Surgeon.—By S. O. 113, Department of the East, June 17, 1872, assigned to temporary duty at Fort Wood, N. Y. H.

POPE, B. F., Assistant Surgeon.—By S. O. 115, Department of the South, June 4, 1872, granted leave of absence for 30 days.

LORING, L. Y., Assistant Surgeon.—By S. O. 113, C. S., Department of the East, assigned to duty as Post Surgeon at Plattsburg Barracks, N. Y.

CAMPBELL, A. B., Assistant Surgeon.—By S. O. 128, War Department, A. G. O., June 4, 1872, granted leave of absence for six months on Surgeon's Certificate of Disability.

HARVEY, P. F., Assistant Surgeon.—By S. O. 105, Department of Texas, June 7, 1872, granted leave of absence for 30 days on Surgeon's Certificate of Disability.

Medical Items and News.

The late Dr. E. B. Dalton.—Resolutions and remarks on the death of Dr. E. B. Dalton, offered by Dr. Geo. A. Peters at a meeting of the Medical and Surgical Society of New York, June 8th, 1872:—

Whereas, it hath pleased the Allwise to remove from among men our associate, Dr. E. B. Dalton:

Resolved, That this Society has received with profound regret the news of the death of Dr. Dalton.

Resolved, That in his death a bright light in our profession has gone out, and a void is left which it will be hard to fill.

Resolved, That we cherish his memory as that of one who, by a life of self-sacrifice and devotion to duty, shed lustre upon a noble profession, and left a record which all who come after may study to advantage.

Resolved, That a copy of these resolutions be published in the medical journals.

Resolved, That a copy be forwarded to his brothers and sister as an expression of the sympathy we feel for them in their affliction.

At the last meeting of this Society, held at the house of Dr. McLane, I was requested to offer at the next meeting resolutions expressing our sense of the loss which we had sustained in the death of Dr. E. B. Dalton.

I cannot present these resolutions without saying a word or two in testimony of the rare character and great worth of their subject.

I have known Dr. Dalton ever since the commencement of his professional career, and during a part of that time we were intimately associated. I can truly say that no friendship, formed after the heat and fervor of early youth had passed, has so entwined itself about my heart.

You will all bear witness to the truth of what I say, when I claim that Dalton was one of those rare characters whom we seldom meet.

Guileless as a child, he was as fearless and true as any knight of the olden time.

With great sweetness of temper he combined great firmness and determination. His executive power was such that he seemed born to command.

All these qualities were called into play during the war of the rebellion. Actuated by motives of the purest patriotism, he enlisted heart and soul in the cause. Commencing as an assistant surgeon in one of our early volunteer regiments, he rose rapidly from rank to rank until during the last, long, memorable campaign, in charge of all the sick and wounded at the base, he filled a position second to none in importance and responsibility.

Never physically strong, the exposure and hardships to which he was subjected planted in his constitution the seeds of that disease which finally terminated his life.

Many of you will doubtless well remember his worn and weary look when he was brought North by kind friends who went to seek him, and found him perishing in the pestilent swamps of the Chickahominy.

He remained with us only long enough to recover partially, and then, urged by that sense of duty which always impelled him, he returned to the field of his duty and labor, never again to leave it until, "the victory won," he returned to throw aside the trappings of war and mingle with us here in the city of his adoption.

The remarkable faculty for command and "for evolving order out of chaos," which he had shown in the army, indicated him as the man eminently fitted to organize the Board of Health, which was to be established under the new charter in this city.

He was made Sanitary Superintendent. Most of the measures which were adopted for improving the health of the city and preventing the spread of contagion were due to his foresight and fearless performance of duty.

When the commission came to be a political machine he left it in disgust, to devote himself to private practice, in which he was admirably fitted to achieve marked distinction.

Now came upon him that terrible avalanche of affliction, which swept from him wife, family, and what remained to him of physical health. His mind and courage it could not crush. He was under it all the same uncomplaining, sympathetic, gentle nature. A trip to Europe benefited him somewhat, but after an attempt to settle in Boston and practise his profession in the home of his brothers and early friends, he was obliged to relinquish the effort and seek for health in some more genial clime.

Last autumn he left us for the Pacific slope, hoping that in the open-air life of that salubrious region he might find the healing spring.

A few weeks ago we heard of his death. Just how he died I have not yet learned, but that he was surrounded by brothers and kind friends I doubt not.

He has gone to join those whom he loved so dearly. He is now beyond the veil through which for these years past he has been gazing so intently. He has left none braver and truer behind him.

May we all so live that, when we come to die, we may leave behind us a memory as green and fragrant as that of Edward Barry Dalton.

Prof. Wm. Warren Greene, of the Bowdoin Medical College, Maine, has accepted the chair of Principles and Practice of Surgery and Clinical Surgery in the Long Island College Hospital, Brooklyn, N. Y.

Dr. Julius Nicolaysen, of Christiania, Norway, has been appointed to the Professorship of Surgery in the "University of Christiania."

The International Ophthalmological Congress.—This Congress will be held this year in London, August 1st, 2d, and 3d, at the Royal College of Physicians, Pall Mall. Notices of papers to be read should be transmitted to the Honorary Secretary, Mr. Wells, 16 Saville Row, London, W., without delay.

To Regulate Pharmacy.—In accordance with the act to regulate the practice of pharmacy and the sale of poisons, passed by the last State Legislature, the College of Pharmacy of the City of New York has elected Dr. Wm. Manlius Smith, Dr. Wm. Neergaard, Dr. F. H. Weismann, Paul Balluff, and Theodore Frohwein as a Board of Pharmacy, to serve for the next three years.

Medical Library and Journal Association of New York.—The opening of the new rooms, No. 107 East Twenty-eighth street, between Lexington and Fourth avenues, took place on Friday evening, June 7th, 1872, with an address by Dr. Isaac E. Taylor. Dr. J. W. S. Arnold also exhibited upon the screen, with the aid of the lantern, a selection of elegant photo-micrographs.

Medico-Legal Society of New York.—At the monthly meeting of this Society, held June 13, 1872, Dr. Stephen Rogers, President, in the chair, Dr. Ely Van De Warker, of Syracuse, N. Y., read a timely paper on "The Criminal Use of Proprietary or Advertised Nostrums."

Dr. Lewis A. Sayre.—The decoration of the Royal Order of Wasa, conferred by Carl IV., King of Sweden, upon our townsman, Dr. Sayre, consists of a crown of gold set in emeralds, rubies, etc., etc., from which is pendant a Greek cross of white onyx, surrounded with gems, and is worn with a green ribbon.

Dr. Sayre, when in Europe last summer, was consulted by the King in reference to the young heir apparent, who has since recovered through the application of the principles laid down by him. For this great service, and those rendered to medical science in Sweden, this honor has been conferred. We publish below a translation of the diploma:—

(*Translation*).—Charles, by the Grace of God, King of Sweden, Norway, the Goths and the Vandals, makes known:

Whereas we are informed of the meritorious attainments through which Lewis A. Sayre, Doctor of Medicine, and Professor of Orthopedic Surgery at the Bellevue Hospital Medical College in New York, has always distinguished himself; we do hereby, in recognition thereof, as a mark of Royal grace and esteem, appoint him, the said Dr. Lewis A. Sayre, a Knight of our Order of the Wasa, of which we are ourselves Grand Master.

In witness whereof, we have caused these Letters to be made Patent under the signature of our Chancellor for said Order, and the Seal of our Royal Order of the Seraphim.

Dated at our Palace in Stockholm, this 18th day of April, 1872.

[Seal.] G. A. Sparre, *Chancellor.*

Countersigned, R. Wachtmeister.

Large Gall-Stone.—Dr. Smith, of Pittsfield, Mass. (*Boston Medical and Surgical Journal*), at the January meeting of the Berkshire District Medical Society, exhibited a gall-stone, weighing 107½ grains. It completely filled the gall-bladder, of which it was an accurate mould, and sent a stem a short distance into the duct. The gall-bladder was tightly contracted about the calculus, and did not contain a particle of bile. The patient was an old lady, who for twelve years had suffered from abdominal pain. There was also found an extensive scirrhous deposit in the omentum, mesentery, and coats of the large intestine and rectum.

Quarterly Report of the St. Franciscus Hospital, New York City.—During the quarter beginning January 1st, 1872, and ending March 31st, 1872, there were received into the hospital 290 patients, of which number 192 were males and 98 females. Of the former the greater number were young, unmarried mechanics without any means; most of the female patients were servant girls.

The St. Franciscus Hospital, belonging to the Sisters of the Poor of St. Franciscus, is purely a hospital for the poor sick.

The physicians connected with the hospital are:—

Dr. Achilles, Physician in Charge.

Dr. Carl H. Lellmann, Consulting Physician for Internal diseases.

Dr. Hermann F. Guleke, Consulting and Attending Surgeon.

Professor Dr. Joseph Kammerer, Consulting and Attending Physician for Diseases of Women.

Dr. Kammerer holds a clinic on Monday and Thursday from 11 to 12 A.M., for gynæcological cases.

Of the 290 patients received during the quarter there were discharged cured, 134; transferred to the public hospitals as incurable, 15; died, 51; remained in the hospital on March 31st, 1872, 90.

Diseases.—Abscessus femoris (male), 1, discharged cured; alcoholismus (3 males, 1 female), 4, 2 died of general marasmus, having been received in a dying condition; apoplexia cerebri (male), 1, discharged improved; atherosis (male), 1, died of pneumorrhagia; bronchitis (11 male, 5 female), 16, discharged cured 15; carcinoma (female), 3; carcinoma mesenteric post extirpationem mammæ carcinomatosæ, discharged incurable; carcinoma medullare portionis pyloricæ ventriculi, died; carcinoma (scirrhus) hepatis, died; caries 2; caries ossis temporalis (female), caries ossium talis (male.)

E. S., 28 years old, born in Germany, grocery clerk, of medium size, with well-developed muscles and of healthy appearance. Has had the measles in childhood, enjoyed good health otherwise till his 25th year. At this time he was taken sick with intermittent fever of the tertian type, and remained sick for 9 months. He emigrated to America at the age of 26 years. In the spring of 1871 he suffered from a rheumatic attack of the joints of the right foot, arm, and both shoulders, and was in consequence received into the St. Franciscus Hospital, where he remained from April 16th to May 30th, '71. Having by this time been cured from the rheumatism, a pain remained in his right foot. He then left the hospital and worked at his trade during the next four months. The pain in his foot, however, increasing, he was again obliged to enter the hospital, November 1st, 1871. Since January 1st, 1872, *i. e.*, since he came under the charge of the physicians at present connected with the hospital, a swelling was found over the tarsal bones of the right foot, which did not yield to any medical treatment. The tarsal bones were loose and movable, and Dr. H. F. Guleke diagnosticated caries of the tarsal bones. Upon making an incision on both sides of the foot a quantity of pus was emptied. On the 4th of March Pirogoff's operation was performed by Dr. Guleke, assisted by Drs. Lellmann, Naughton, and Rose. Ten ligatures were applied, the stump treated by simple cold-water dressing. On cutting into the amputated part the following was found: Suppuration between the first and second row of the tarsal bones, and between these and the metatarsal bones; the scaphoid bone was denuded and softened; also softening of the head of the astragalus. Fever setting in soon after the operation, large dose of quinine were administered; the temperature did not exceed 37.7° C., nor the pulse 128. Nothing unusual happened, and the patient gradually recovered. A glandular swelling was found to exist, April 15th, behind the knee-joint over the amputated limb; it disappeared, however, slowly, until at the present time hardly anything can be seen. The posterior portion of the osteoplastic flap is firmly united with the tibia. The leg can be stretched completely, though the patient is as yet unable to rest the weight of his whole body on the stump. Upon measurement of the two legs there was no difference in length of the one as compared with the other perceptible.

Chlorosis, 5 (female), discharged cured 3; combustio, 1 (female), died, extensive injuries, received in a dying condition; contusio antibrachii, 1 (male), discharged cured; coxitis, 1 (male); cysis ovarii, 1, discharged as incurable; diathesis hemorrhagica, 1 (male); distorsio pedis, 2 (male), discharged cured; duodenitis, 1 (male); emphysema pulmonum, 3 (male), discharged as incurable, 2; endocarditis, 1 (male), died; enteritis chronica, 1 (male), discharged cured; erysipelas faciei, 12 (9 males, 3 females), discharged cured, 9; exarticulatio digitorum 2, 3 et 4 (male), 1, discharged cured; fractura digiti, 1 (male), discharged cured; fractura antibrachii complicata, 1 (female), died of pyæmia, patient was 72

years old; fractura radii, 1 (male); fractura humeri et ilii, 1 (male), died of pyæmia, a great many abscesses formed, long-continued suppuration; gastritis catarrh. acut., 16 (11 male, 5 female), discharged cured, 15; gastro-enteritis, 6 (4 male, 2 female), discharged cured 3, died 3; hemiplegia, 2 (1 male, 1 female); hernia inguinalis, 1 (male), discharged; hyperæmia cerebri, 1 (male), discharged cured; hypochondria, 1 (male), discharged; hysteria, 4 (female), discharged; icterus catarrhalis, 1 (male); intermittens, 3 (2 male, 1 female), discharged cured, 2; insufficientia valuke mitralis, 4, discharged incurable 1, died 3; kyphosis, 1 (female), discharged improved; leucæmia, 1 (female), died; lupus, 1 (female); lymphangitis, 1 (male), discharged cured; marasmus, 2 (1 male, 1 female), discharged 1; metritis, 1 (female), discharged 1; morbus Brightii, 9 (5 male, 4 female), discharged cured, died 1, received in a dying condition; œdema inflammatorium, 2 (male), discharged cured, 1; paralysis agitans, 1 (male), discharged incurable; paraplegia, 2 (female), died 1; perimetritis; perniones, 1 (male), discharged cured; pharyngitis, 1 (male), discharged cured; phlegmasia alba dolens, 1 (female), discharged cured; phlegmona pedum, 1 (male); phlegmona brachii, 2 (male), discharged cured; phlegmona antibrachii, 1 (male), discharged cured; pleuritis, 6 (male), discharged cured, 3; pneumonia, 23 (8 male, 15 female), viz., pneumonia catarrhalis chronica, 10; pneumonia catarrhalis subacuta, 7; pneumonia catarrhalis crouposa, 6; discharged unimproved, 19, died 3—of these 3 cases of death (croupous pneumonia), 2 were topers and 1 a man 60 years old; pneumo-phthisis, 40 (26 male, 14 female), discharged incurable 8, died 19; prolapsus uteri, 1, discharged improved; rheumatismus, 39 (31 male, 8 female), discharged cured, 23; salivatio mercurialis, 1 (male), discharged cured; senectus, 26 (13 male, 13 female), died, 5—among them a man 105 years old, still alive, and comparatively healthy; stenosis valvulæ mitralis, 3 (female), died 2; thrombus vaginæ, 1, discharged cured; tonsillitis, 1 (male), discharged cured; typhus abdominalis, 1 (female), died; typhus abortivus, 3 (2 male, 1 female), discharged cured 2, died 1; typhus petechialis, 1 (female), died; ulcus varicosum cruris, 5 (4 male, 1 female), in one case successful transplantation of skin was made, 4 were discharged cured; uvulitis, 1 (male), discharged cured; variolois, 1 (male), turned over to the Board of Health; variola, 2 (male), turned over to the Board of Health. 32 deaths were the result of incurable and necessarily fatal diseases; actheroma, 1; carcinoma, 2; valvular diseases of the heart, 5; pneumo-phthisis, 19; old age, 5. The other 19 fatal cases were mostly in already a dying condition when received, or fatal complication ensued after reception.

The Hamlet of Edwin Booth Psychologically Considered.—In an interesting article on "The Hamlet of Edwin Booth, a Psychological Study," by A. O. Kellogg, M.D., of the Hudson River State Hospital, published in the *Journal of Psychological Medicine*, April, '72, the author shows that the reason why this remarkable actor has the unequalled power of delineating this melancholic character was, that the sorrows which have overshadowed him bore a certain resemblance to those which came upon Hamlet. Like Hamlet, Edwin Booth's first great sorrow was the death of a kindly, generous, and illustrious father. The next great affliction was the death of a wife, a woman of great personal charms and loveliness of character—resembling in a measure that which came upon Hamlet in the estrangement and death of Ophelia. He made his first, deep and abiding impression upon his countrymen by enacting Hamlet for one hundred consecutive nights to crowded houses. Dr. Kellogg inquires: "Who can say to what extent the success of the delineation was dependent upon the recent affliction of the delineator?" Time had barely toned down the preceding sorrow, when the hand of a younger brother carried not only death and desolation, but calumny and dishonor, into the family of which Edwin was the acknowledged head.

Between the character of Hamlet as drawn by Shakespeare, and that of Edwin Booth, the author thinks there are certain points of resemblance. There is a strange, silent, thoughtful, melancholic mystery about both not easily penetrated, or analyzed fully.

Dr. Kellogg has shown, on a former occasion, that Hamlet was a melancholic, and melancholy is now regarded as a distinct form of mental derangement.

General Paralysis of the Insane.—Dr. Edward S. Dunster, N. Y. (*Journ. Psychological Medicine*), April, '72, has an elegant translation of the able and extended "Historical Sketch of the General Paralysis of the Insane," by M. le Dr. Arch. Foville, Jr.—originally inserted in the *Annales Médico-Psychologiques* of September and November, 1870.

Fees in San Francisco.—The following rate of charges has been adopted by the Medical Societies of San Francisco (*Pacific Med. Journal.*)

For one ordinary visit	$2.50 to $5.00
For one night visit (from 10 P.M. to 7 A.M.)	5.00 to 10.00
For first consultation	10.00
For each following consultation	5.00

N.B.—Fees for consultation will be charged by the attending, as well as by the consulting physician.

For office advice in ordinary cases	$2.00 to 5.00
For special examinations	3.00 to 10.00
For ordinary obstetrical cases	25.00 to 50.00

For instrumental and extraordinary cases, not less than double fees.

For vaccination	$2.00 to 5.00

Surgical treatment according to custom and agreement.

This fee-bill is not intended to apply to the practice of specialists, or in cases of extraordinary services.

Libraries in New York City.—The numerous libraries in the Empire City are immensely valuable to the medical, law, and general student in his researches. The number of volumes in the subjoined libraries is as follows: The Astor Library, about 225,000 volumes; Mercantile Library, 125,000; Cooper Union Free Library, 30,000; Historical Society Library, 50,000; Society Library, 65,000; Library of the Young Men's Christian Association, 10,000; N. Y. Hospital Library, over 8,000 volumes; Medical Library and Journal Association of New York, about 4,000; Mott Memorial Medical Library, 3,000; Library of the N. Y. Academy of Medicine, between 1,200 and 1,300 volumes; of the College of Physicians and Surgeons, 1,200; Bellevue Hospital Library, about 350 volumes; and thousands of volumes in the various law libraries.

Brown Windsor Soap, instead of being, as formerly, purified soap colored with caramel, is said, by a writer in *Nature*, to be composed at present of unpurified bone-grease which retains its color, and has its bad odor disguised by a perfume. The same writer attributes to the use of the latter variety a succession of attacks, resembling eczema, which supervened upon its use as a shaving soap, and which persisted, in spite of treatment, during each continuance of its use.

Typhoid Fever.—In England alone from 100,000 to 150,000 people have typhoid fever annually.

The Blind.—Of the 500 cases at the Perkins Institute, Boston, Mass., the causes of blindness were as follows: Congenital, 37.75 per cent.; disease, 47.09 per cent.; accidents, 15.16 per cent. Of 1,102 persons admitted to this institution 878 survive; whereas the life table of Massachusetts calls for 964, and that of England for about 979 survivors, showing that the power of the blind to resist destructive influences is 8.9 per cent. less than that of the population of Massachusetts.

Loss of Life by Lightning.—In 1864, Boudin presented to the French Academy a report showing that in France, during a period of twenty-nine years, 2,238 persons were killed by lightning, and 6,714 struck without being killed.

From a similar table of Poey, it appears that in the United States, during a period of twelve years, 262 persons were killed by lightning, and 430 more or less injured.

In England, 103 persons were thus killed within a space of five years. In Prussia, about 72 individuals, on an average, are killed by lightning every year. In France the average is a little higher.

From the investigations of Dr. Ball, in reference to the province of Mecklenburg, in the kingdom of Prussia, extending through a period of eleven years, it appears that one person is killed by lightning out of every 247,000, and one struck out of every 121,300 of the entire population. In Saxony, every year, one person out of 200,000 loses his life by lightning.—*New York Observer.*

Transactions of the Twenty-first Anniversary Meeting of the Illinois State Medical Society, held at Peoria, May 16th, 1871. Chicago, 1872.

The report of this meeting was among the losses by the great fire, having been destroyed with the publishing house. The present report, therefore, is but a partial one, in consequence of the destruction of the original manuscripts and the absence of statistics, etc., necessary for duplication of the work. The matter republished contains little that has not already appeared in type elsewhere. Dr. Prince makes a somewhat lengthy report on the advance of plastic and orthopædic surgery, which is profusely illustrated with woodcuts, and appears to be mainly composed of his own cases. The latter may be said of the Statistical Report on Cataract by Prof. E. L. Holmes, of Rush Med. College. The paper by Dr. Addison Niles, of Quincy, on Criminal Abortion, leads us to infer that, even at the West, society is cursed with this crime in no small degree.

Transactions of the Wisconsin State Medical Society for 1871.—The style with which this report of 197 pages is gotten up does credit to the publisher, David Ramaley, of St. Paul, Minn., as the contents does to the Society, who, during their three days' session, seem either to have lost sight of the fact that there is such a thing in existence as a "code of ethics," or else have no supposed infringements of it to wrangle over. Most of the papers read were based upon the individual observation of cases, and may be partially enumerated as follows: Cause and Treatment of Puerperal Convulsions, and the Condition of the Puerperal Woman; A Case of Aneurism of the left Internal Iliac Artery; A Case of Subcutaneous Nævus Cured by Injection of Persulphate of Iron; Synopsis of a Case of Diseased Bladder and Kidney, resulting from Enlarged Prostate; Case of Diseased and Adherent Placenta. Also two Cases of Placenta Previa; Excision of the Clavicle for Osteo-Sarcoma; An Essay on Hysterico-Neuralgia, or Spinal Irritation, with Report of Cases; A Wooden Pessary Retained for over Seventeen Years; A Case of Paracentesis Thoracis; A Case of Abscess of the Right Ovary; A Case of Recto-Vaginal Fistula in a Babe of Eleven Months; A Case of Ovariotomy; A Case of Complete Extroversion of the Bladder through the Urethra, etc., etc.

Proposed French Law Against Drunkenness.—A bill which has been laid before the members of the French National Assembly for discussion, and has been reserved for discussion, provides:

1.—Those persons found in a state of manifest drunkenness in the streets, alehouses, or other public places, shall be liable to a fine of from one to five francs.

2.—Such persons as shall have undergone, in less than three years, two condemnations under the preceding clause, shall be liable to imprisonment for from six days to a month; and to a penalty of from six to three hundred francs.

3.—Every person who shall have been condemned for manifest drunkenness, according to the second clause, shall be declared incapable—1st. Of using the franchise. 2d. Of being elected as member. 3d. Of being nominated for any public appointment, or exercising any public office. 4th. Of bearing arms for the space of two years from the date of condemnation.

4.—All electors or jurymen so appearing shall be similarly punished.

5.—Keepers of cafés, who allow their customers to drink to excess, are to be punished.

Sea-Water in London.—A bill is before the British House of Parliament to provide for the introduction into London of sea-water for bathing purposes, the extinguishing of fires, sprinkling of streets, etc., and has every promise of going into effect.

New Publications.

Books Received.

Doctor in Medicine and other Papers on Professional Subjects. By Stephen Smith, M.D. New York: W. Wood & Co. 1872.

Corals and Coral Islands. By James D. Dana, LL.D., Prof. Geology and Mineralogy in Yale College. New York: Dodd & Mead. 1872.

The Mother's Register: Current Notes of the Health of Children (Boys) and for (Girls). From the French of Prof. J. B. Fonssagrives. New York: John Ross & Co. 1872.

Autumnal Catarrh (Hay Fever), with three Maps, by Morrill Wyman, M.D., of Boston. New York: Hurd & Houghton. 1872.

On Food, its Varieties, Chemical Composition, etc., etc. By H. Letheby, M.B., M.A., Ph.D., London. 2d Ed. New York: W. Wood & Co. 1872.

The Correct Principles of Treatment for Angular Curvature of the Spine. By Benj. Lee, A.M., M.D. Philadelphia: J. B. Lippincott & Co. 1872.

Original Communications.

CONTRIBUTIONS TO THE SURGERY OF THE MALE URETHRA.

BY CHARLES K. BRIDDON, M.D.,

NEW YORK.

Previous to resuming the subject treated of in the number of the Record for June 1st, 1872, I desire to make a few remarks pertinent to this department of surgery, and suggested by an article in the same journal, entitled "Remarks on Cystotomy, by H. K. Clarke, M.D., Geneva, N. Y." The case on which these observations were based was one of retention from hypertrophied prostate, occurring in the practice of Dr. George N. Dox, and in which the bladder was relieved, by puncture above the pubes with a trocar one-twelfth of an inch in diameter. The operation was repeated six times in eight days. The case was fully reported and bears the impress of originality of conception for which we must certainly give Dr. Dox the credit; but the annals of surgery have afforded a precedent, for since 1863 the minds of Parisian surgeons have been actively engaged on this very subject.

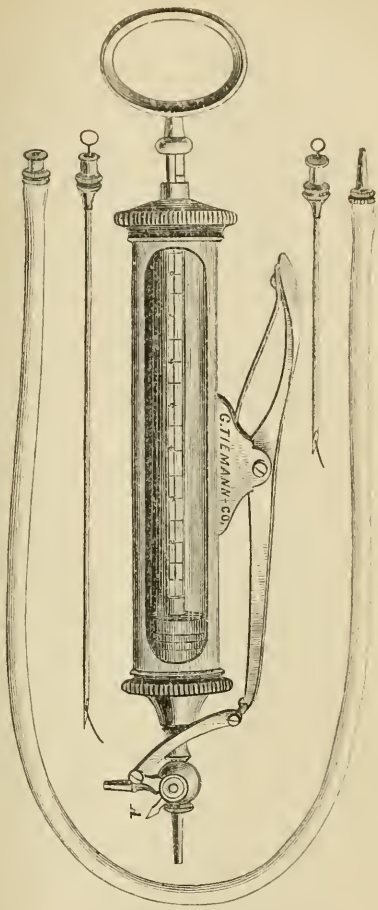
In 1871* Jean Watelet published a little brochure on the subject of puncture of the bladder by the capillary trocar and pneumatic aspirator. These instruments have been used for some time in the hospitals of Paris for emptying abscesses, ovarian and other cysts, pleuritic, pericardial, peritoneal, and articular effusions. In his essay Watelet refers to six cases of retention relieved by the same means. The causes of engorgement were stricture and hypertrophied prostate. The punctures were made in the mesial line immediately above the pubes, and were repeated three or four times a day without in any case producing the slightest local mischief, and the author has arrived at the following conclusions: 1. That the capillary puncture is an operation of perfect innocence. 2. That in every case it ought to be substituted for the ordinary hypogastric puncture. 3. It can be practised three or four times a day, replacing catheterism where that operation is impossible.

The apparatus used in these cases was either Potain's or Dieulafoy's.

Potain's consists of three trocars, in diameter one-third of a millimetre, one millimetre, and one millimetre and a half; these have stopcocks immediately below which are lateral tubes that connect with a jar containing air or water through the medium of elastic tubes, and the exhaustion is made by a syringe which also communicates with the jar.

Dieulafoy's instrument is a glass syringe with a graduated piston and a lateral outlet with stopcock like the old-fashioned stomach-pump, and it is furnished with different-sized trocars. Both of these instruments are made by Matthieu, the surgical instrument maker of Paris.

The woodcut represents the instrument of Dieulafoy as improved by Mr. Stohlmann, of the firm of George Tiemann & Co. of 67 Chatham St., New York City. The alteration was suggested by Dr. T. A. Emmett, and I think may be claimed as a real improvement. The exhausting apparatus is only required in exploring cavities filled with more or less viscid contents. For retention nothing would be necessary but the capillary trocar.



Cystotomy, and by that I mean cutting into the bladder, was proposed some years ago by Prof. Willard Parker as a remedy for those intractable cases of chronic cystitis that refuse to yield to other means. I am not aware that it has been done on the male. I do not think the wound could be kept open long enough for the bladder to recover itself without the assistance of a canula, which would not be tolerated in an inflamed organ.

The operation has been done through the vagina in the female by Drs. Emmett and Sims with good success, the opening remaining as a vesico-vaginal fistula which is subsequently closed by the usual operation for that condition.

It certainly seems a harsh proceeding to inflict a wound upon the walls of a viscus whose lining membrane is in a condition of chronic disease, and its value can only be appreciated by those conversant with such cases, and with the fact that there are a certain number of them that will not yield to any treatment whatever. I have at present under my charge two cases of chronic cystitis. In one, injections have been used every day for more than two years; in the other, for a period of fifteen months; and I believe both these men are condemned for life to pursue this, the only course that makes to them life tolerable. I can call to mind an old Welchman who was under my care five or six years ago, with the same malady which had troubled him for

* De la ponction de la vessie à l'aide du trocart capillaire et de l'aspiration pneumatique. Paris, 1872.

years. I split his obstruction, in the presence of Dr. R. W. Taylor, with Holt's dilator, and it took three or four months of injections to get his bladder right. Eighteen months ago he again consulted me on the same subject. He had neglected to use his sound as directed, his stricture had contracted, and he was suffering so severely from his cystitis that I really had apprehensions as to the result. On this occasion I divided the obstruction with Maisonneuve's urethrotome, and it again took several months to get his bladder in good condition.

In the large majority of these cases the benefit to be derived from a carefully regulated local and general treatment is strikingly marked, but there will always remain a small percentage that will not yield to any remedial means whatever; but I will now resume the subject of the paper, commencing with case of stricture.

RUPTURE OF URETHRA; EXTRAVASATION OF URINE; RECOVERY; SUBSEQUENT TREATMENT OF OBSTRUCTION BY INTERNAL URETHROTOMY; RECONSTRUCTION; URINARY ABSCESSES; FISTULÆ; SECOND RESORT TO URETHROTOMY.

On the third of February, 1869, Dr. T. B. Stirling requested me to visit in consultation a gentleman who had been under his, the Doctor's, professional care for some time. I was informed that he had suffered from symptoms of stricture for at least a year; that he had been treated by dilatation, but that the process had been protracted and interfered with by his irregular attendance, and that in fact he had absented himself from his physician for several weeks previous to the 2d of February, when he felt something give way whilst he was in the act of emptying his bladder. The rending sensation was immediately followed by a sense of burning pain in the scrotum and supra-pubic region. In the absence of Dr. S., he was seen by a neighboring physician, who mistook the case for one of erysipelas and prescribed accordingly. Dr. S. saw him on the morning of the third, and recognized the existence of extravasation at once.

I found the patient, James B., a young man of twenty-five years, of short stature and of spare habit, deeply pitted with the cicatrices of variola. In response to inquiries, he informed me that he had always enjoyed good health; that he had contracted a soft chancre once and gonorrhœa a number of times, and that he had not been entirely free from more or less discharge for more than two years. He first noticed a diminution in the size of his stream about a year ago; has never suffered from retention, nor from irritable bladder. He has an obstruction four and one-half inches from the meatus, through which little or no urine has passed for the last eighteen hours. His scrotum is enormously swollen, and the line of extravasation can be traced over the pubes and upwards on the right side on a line parallel with Poupart's ligament, as high as the anterior superior spinous process of the ilium. Even beyond this point there are some patches of discolored swelling between the crest of the ilium and the ribs. All the above-mentioned parts were in a condition of hard, brawny œdema, in some spots boggy, and the discoloration of a dull brick-red, shading off into the natural color of the skin. Considering the character of the local lesion and the amount of urinary infiltration, his constitutional symptoms were slight. His skin was moist, tongue covered with a creamy fur, and his pulse 110. I did not meddle with the stricture, beyond noting its position, at least an inch and a half in advance of the attachment of the bulb to the deep perineal fascia, regarding liberation of the pent-up urine as the first indication. I supposed, as the patient had had no retention at any time, that ulceration and perforation of the urethral walls immediately behind the stricture had taken place, and that an instrument passed through the obstruction would be more likely to pass through the perforation than to traverse the natural channel; and in accordance with these views I made a free incision on either side of the scrotal raphe, another in a line parallel with and an inch above Poupart's ligament, reaching from the anterior superior spinous process of the ilium to near the spine of the pubes, and another between the crest of the ilium and the floating ribs. The connective tissue exposed by these incisions was in a condition of slough, and a free exit was given to a discharge having a urinous, fetid odor. The parts were directed to be poulticed, and he was put upon the use of quinine and mist. vini gallici.

On the 5th I saw him again with Dr. S. His general condition was good; pulse below 100, temperature normal, tongue moist. He complained of no pain, and took solid food with hearty relish. I introduced a drainage tube through the wound over the ilium, and carried it downwards and inwards and under the soft parts forming the pubic eminence, and thence through the opening on the right side of the scrotum. I directed a stream of carbolic acid water, a teaspoonful to the pint, to be carried through this channel every four hours, and substituted for the poultices a dressing of oakum wet with the same solution. The drainage tube was maintained *in situ* for about a week, when the openings appeared so free that its use was discontinued. Sloughing to a very considerable extent took place around all the incisions, but principally in the groins, where a space about six inches by three was bared, exposing the tendon of the ext. oblique. However, in the space of six weeks cicatrization was complete, and I advised the Dr. to commence dilatation.

In the middle of May the doctor informed me that he had not been able to advance beyond No. 2, and I again saw the patient. With considerable difficulty I engaged a No. 3 French flexible bougie. It was firmly grasped, and I could advance no further. The patient was at once put under the influence of chloroform, and I endeavored to introduce Holt's dilator, but I was foiled in the attempt, and at last succeeded in passing Maisonneuve's urethrotome, with which I divided the stricture. I then introduced a large-sized silver catheter. This was left in thirty-six hours, and subsequently the doctor introduced a sound every other day. The patient was duly admonished, and informed that the patency of the canal depended upon the regular occasional introduction of an instrument, and as Dr. Stirling subsequently informed me, he was quite able to manipulate for himself.

In October, 1870, I was again summoned to visit J. B. in consultation with Dr. J. W. Wright. He had for a long time failed to obey the injunctions of his former physician with regard to the occasional introduction of a large-sized sound, and a few months ago, noticing a diminution of the stream, had resorted to it in vain, and contented himself with a No. 5 silver catheter. He had now a large acute urinary abscess, situate in the scrotum. This I freely opened, giving discharge to a large amount of dark-colored, most offensive fluid, and exposing an irregular cavity with thin walls, which were covered with a dark-greenish pultaceous deposit. There was certainly no extravasation; it was simply an abscess with limiting walls, but the lining membrane appeared to be in a condition of gangrene. I advised that it should be syringed out several times a day with carbolic acid water, and that its edges be kept separated with oakum.

In the beginning of May, 1871, J. B. called upon me at my office. He says that the scrotal abscess degen-

erated into a fistula, through which the urine came for some time, but that none has escaped for the last two months; and there is now a small swelling, not in the site of the old abscess, the contracted walls of which can be plainly felt and traced up to their connection with the urethra, but alongside of it, and apparently situate in one of the cicatrices resulting from the incisions made to relieve the extravasation which occurred in 1869. However, the swelling was small, not larger than a hickory-nut, and as it was on the eve of opening on the surface, I directed my attention to the stricture. By external manipulation the small abscess, evidently formed in the track of an old fistula, appeared to be attached by a pedicle to the root of the penis; the contracted walls of the other fistula could be traced up to the same point, and where these two fistulæ converged to join the urethra, the canal itself swelled out into a hard nodular mass as large as a filbert, fusiform in shape; and the dense walls of the urethra could be traced in the perinæum as far as the point where it dips to its attachment with the deep perineal fascia. The meatus was slightly deformed by the cicatrix of a chancroid. On introducing a bougie, a dense obstruction was detected four inches and a half from the meatus. I could only pass the smallest-sized *bougie à boule* through this and another contraction situate half an inch behind; the grasp was of such a persistent character that I could not examine beyond.

At the next sitting I first introduced a No. 3 French flexible, and on its removal immediately introduced one of the finest filiform French, and with this detected a close stricture at the subpubic curvature. Through this I could pass no flexible instrument, but succeeded with the smallest-sized sound and a finger in the rectum. The grasp of the first stricture is such that I should despair of obtaining a successful issue by any other means than divulsion or internal division, and the urethra at that point appears to be so bound to the face of the pubic bones by cicatricial tissue that I should fear to use a straight instrument such as the dilators of Holt or Maisonneuve, and shall in preference use the urethrotome as soon as the local conditions are improved.

I presume that in this case the extravasation took place anterior to the deep perineal fascia; hence the favorable result which followed free and timely incisions. It has been my good fortune only to have met with two other cases of extravasation in my own practice. One I saw about twelve years since in the person of an old intemperate man in Whitehall street. In his case gangrene had occurred to a very considerable extent before I saw him, and I made the necessary incisions in the presence of Prof. Wm. H. Van Buren.

The other case I saw about ten years ago at Laird's Hotel. The incisions, which were small, were made in the presence of Dr. Gurdon Buck. Both of these cases terminated fatally, and, from examination of the parts during life, I had reasons to believe that in both the extravasation had occurred beneath the deep perineal fascia, but in neither case was I permitted to verify such opinion by autopsy.

In looking over these clinical histories, I find another case of traumatic stricture, which yielded satisfactorily to continuous dilatation.

RETENTION OF URINE; STRICTURE OF THE URETHRA.

February 17th, 1858, I visited William Burnett, 47 years of age, Scotchman, married, and the father of a grown family. Should judge from his appearance that he was a man of intemperate habits. He denies having had gonorrhœa, but states that two months ago he fell astride the chine of an empty barrel. The accident was followed by hæmaturia and painful micturition, which symptoms, however, gradually subsided, and he suffered no further inconvenience until the 10th of the present month, when he found himself unable to empty his bladder. After lasting twenty-four hours the retention yielded to the application of warmth, in conjunction with some domestic remedies. After this he found the stream much diminished in volume. On the 15th he had another attack of retention, which did not yield to the means that were found useful on the first occasion, and he was obliged to call for professional assistance.

Present Condition.—Patient is in a condition of considerable nervous excitement, continually getting out of bed to urinate, all of which efforts are unavailing. His tongue is furred, his pulse accelerated, and his skin bedewed with perspiration. On examining the abdomen, I found a tense tumor filling the hypogastrium and reaching nearly to the umbilicus. It is tender, and dull upon percussion. A finger introduced into the rectum detects a globular resisting swelling occupying the situation of the *bas fond* of the bladder, and bimanual exploration elicits fluctuation. In the urethra I found an obstruction at the subpubic curvature. Commencing with No. 6 silver catheter, and diminishing as trials with instruments of larger calibre failed, I at last, and then only after long and patient efforts, succeeded in introducing a No. 1 flexible. Through this I allowed about half the contents of the bladder to escape, securing the end of the instrument with a stopper, and directing him to let a little escape every time the desire became urgent. I deemed it best to secure the catheter, as I feared I might have trouble in introducing it again.

On the 18th I found that the patient had spent a very comfortable night. The presence of the instrument has caused no inconvenience, and his bladder is completely empty.

On the 19th urine passed as freely by the side of the instrument as through it. It is quite loose, and I have replaced it with a No. 3 bougie.

On the 21st patient expresses himself as very comfortable. He says that all along the urethra feels slightly sore, and there is a little purulent discharge from the meatus. I experienced no difficulty at all in introducing a No. 7, which was tied in. After this date a large size was introduced every other day until I arrived at No. 14, when their continuous use was discontinued, and he was directed to have one passed every three or four days.

I have seen this man several times since, when he always reported himself as doing well. I last saw him in 1862, when he informed me that he passed his water as well as ever he did in his life, and that he had not passed an instrument for two years. I saw him usually when visiting one of his friends, and did not have an opportunity to explore his urethra.

INTERNAL URETHROTOMY COMPLICATED WITH HÆMATOMA.

January 27th, 1872, I operated on a gentleman referred to me by Prof. Charles A. Budd. The patient, aged 45, was a man of intelligence and education, had been using sounds and bougies for four years and a half, had become familiar with the treatment, and came predetermined to have his strictures burst or cut.

I found one obstruction at an inch and a half, a second at four inches and a half, and a third at the butt; the first was dense, long, and contractile, the second less so, and the third offered a scarcely perceptible resistance. The two occupying the penile portion could be traced externally as nodular, fusiform masses of cartilaginous consistence. The patient had never suffered

from retention, cystitis, or renal trouble, and was in all other respects a healthy man.

Operation was done at his residence at 11 A.M. I divided the anterior stricture with the bistouri-caché, incising the meatus freely; the obstruction was very dense, requiring considerable force to draw the instrument through it. I then introduced Maisonneuve's urethrotome, divided the other two, and experienced no difficulty in passing a No. 7 sound into the bladder; the hemorrhage was more free than usual, and continued in spite of cold for several hours. Estimated loss ten to twelve ounces of blood. In the evening I found him with a rather formidable hæmatoma; the swelling was situate on the under surface of the organ, which was distorted so as to be markedly concave on its dorsal aspect; it was solid, about the size of half a hen's egg. Divided longitudinally, its centre was over the position of the anterior stricture, the integuments covering the swelling, and for some distance around were of a dark maroon-color, and the prepuce was infiltrated and œdematous. All hemorrhage had ceased during the afternoon; at seven he urinated in a free, full stream. The act was attended with some smarting, and was followed by a few minutes' free bleeding. I was apprehensive that the clot might obstruct the canal, and that the urine might infiltrate through the incisions made in the strictures behind, and I considered the propriety of introducing and maintaining *in situ* a catheter in the bladder; however, he had once urinated freely; I determined to let him alone, simply ordering the constant application of cold spirit lotion. On the morning of the 28th the whole penis was of a deep violet color, almost black, but there was a marked diminution in the size of the swelling; there was entire absence of pain, and he experienced no difficulty whatever in emptying his bladder. Jan. 30th, swelling still further diminished, temperature of parts normal, no signs of urinary infiltration; there is a fœtid discharge from the meatus, which I presume comes from the clot. I experienced no difficulty in introducing a No. 15 sound. Ordered him to wash out the urethra occasionally with a weak solution of carbolic acid, and permitted him to go out.

Feb. 1st. Swelling almost entirely gone. The clot appears to have broken down and escaped per meatum. I passed No. 16 sound with ease.

Feb. 3d. All trace of effusion has disappeared for some time after last note. The axis of the member was slightly distorted by adhesions of the integuments at the site of the first obstruction, situate one inch and a half from the meatus, but as these yielded to time and the traction of occasional erections, the integrity of the organ as regards deformity from curvature was restored.

This case has proved a very instructive one to myself. In the perusal of a large number of cases I find no reference to such an accident, and yet I feel assured that it must occasionally occur. I believe that in incising the anterior stricture I made a complete perforation of the urethral wall, and that blood was extravasated into the loose conjunctival tissue external to it; that the rapid disappearance of the tumor was occasioned by the ready escape of the disintegrated clot through the perforation; for I have noticed on other occasions, in hæmatomas occurring in the same region, but independent of lesion of the canal and not communicating with accidental or natural outlet, that absorption was a very slow process, occupying many weeks. In this case I was also afraid that as the blood-clot escaped urine would gain access, and that my patient would be subjected to the delay and annoyance of a urinary abcess; fortunately nothing of the kind occurred, and he was only confined to his room for a few days.

Feb. 22d. I have examined this patient to-day; the result is all that could be desired. No. 16 sound passes with ease, and the evidences of mischief could only be recognized by the eye of a critic.

(To be continued.)

CLINICAL RESEARCHES IN ELECTRO-SURGERY.

By A. D. ROCKWELL, M.D., and GEO. M. BEARD, M.D.

I.

Electro-Surgery is a department of science that has been so little studied that any contribution to it, however fragmentary and imperfect, becomes of value.

We propose to detail our latest experiments in this direction, and to present whatever conclusions it may be justifiable to draw from them. Both electro-therapeutists and surgeons are now at work in this department, and many of them desire and need whatever assistance can be derived from the successes or failures of others. The pathway that leads to truth on this subject is at best tortuous and obscure; but every advance of the pioneers, every removal of obstructions, makes the journey shorter, clearer, and easier for those who are setting out upon it. An early publication of experience and experiments, provided it be candid and thorough, will secure the aid of many collaborators who may perhaps be induced to carefully study the subject.

Through a variety of laborers there will be brought out a variety of results which will reciprocally supplement and correct each other. Therapeutics in all its branches, and certainly electro-therapeutics, is a subject so wide and so complex that only by comparing the studies of many observers can we arrive at the full truth.

Although a long time must elapse before some of the questions that may be raised in connection with the following clinical cases can be fully answered, yet strong and important points are in the way of setlement. The objection that is often and very properly brought against the early publication of clinical experience, that it is apt to teach either absolute error or but half-truths, need not apply, provided the reports are fairly and impartially made, without any attempt to conceal or distort or in any way warp the evidence to sustain a theory, and no inferences are drawn beyond the requirements of the demonstrated facts. We shall not attempt to exhaust our experiments, but to fairly represent them in all their aspects. Cases of absolute or approximate success will be placed side by side with cases of absolute or approximate failure. Cases where every opportunity was afforded for treatment, and cases that failed for lack of opportunity, will be accorded equal prominence. Cases in which the ordinary and accepted methods of treatment would have been sufficient will be mingled with those cases which under the ordinary and accepted methods would have been utterly hopeless.

Many inquiries of great importance it will be necessary to leave wholly or partially unanswered; to other problems a merely provisional solution will be given, while in some departments we shall be able to draw generalizations that will be at once legitimate and satisfactory.

Those who on the one hand believe that electro-therapeutics is the one great problem of the future, and those who on the other hand suspect that it is all a delusion, will be equally disappointed. The cases that are

to follow are taken from both public and private practice, and many of them were undertaken in the presence and with the assistance of able and recognized surgical authorities.

ERECTILE OR VASCULAR TUMORS.

Erectile or vascular tumors include both cutaneous and subcutaneous nævi. These latter terms, however, simply indicate a difference in seat but not in kind. They are often associated together, and the wide-spread dilatation of cutaneous vessels attended with little swelling that are commonly called mother spots, are evidently similar in character to the subcutaneous variety to which Bell gave the name of aneurism by anastomosis.

These cutaneous nævi may be treated successfully by the needles, but they are so deficient in bulk that it is often impossible to operate without producing a decided scar.

In the treatment of the various forms of subcutaneous erectile tumors, both arterial and venous, it is evident that electrolysis must bear an important part if it does not altogether supersede the knife. Its advantages over other methods are various and decided. 1st. There is not the slightest hemorrhage; not even a drop of blood need be lost. 2d. No scar is left. By proper insulation and care in the introduction of the needles and management of the current, chemical effects will be confined to the blood alone. 3d. During the operation the pain is slight, and subsequently the patient experiences no inconvenience. 4th. The operation is easily performed, and produces no such disagreeable reflections to either patients or friends as the knife or actual cautery. The number of needles to be introduced into the tumor depends very much on its size. When the enlargement is slight, not exceeding in size a small filbert, one needle is sufficient, while a nævus an inch or more in breadth and depth will require three or four.

SUBCUTANEOUS ERECTILE TUMOR OF THE RIGHT CHEEK.—COMPLETE RECOVERY FOLLOWS ELECTROLYTIC TREATMENT.

Case I.—In April, 1871, Dr. D. F. Reynolds consulted us in regard to the case of a little child aged eight months, who was afflicted by an erectile tumor in the right cheek. It appeared shortly after birth, and had gradually enlarged until the date mentioned, when it measured one and a-half inches in width and from one half to three-quarters of an inch in depth. Upon firm pressure the enlargement would almost entirely disappear. The patient having been placed under the influence of chloroform, we operated at Bellevue Hospital in the presence of Dr. Frank Hamilton and his class, by introducing into the four quarters of the tumor four small gilded steel needles insulated to within one-quarter of an inch of the points.

During the passage of a current of very moderate tension the enlargement gradually grew harder and more prominent as the blood coagulated, and at the expiration of eight minutes, when the needles were withdrawn, the part was quite firm. The child suffered no inconvenience during or after the operation, and when seen the next morning was as well and playful as usual. The process of absorption soon became manifest, and in two months three-quarters of the clot had disappeared.

From this time there was a most marked decrease in the rapidity of absorption, since but two months more were required before the clot had entirely disappeared.*

* This case was briefly mentioned in the *New York Medical Journal* before complete absorption had rendered the operation a success.

A LARGE ARTERIAL TUMOR IN A WEAK, ILL-NOURISHED CHILD.—THE RESULT OF ELECTROLYTIC TREATMENT UNSATISFACTORY.

Case II.—Annie ——, a child aged one year, was directed to us by Dr. H. P. Farnham. On her back over the upper dorsal vertebræ we found a large fluctuating arterial tumor, nearly two inches in diameter at its base.

The child was markedly anæmic, and her general condition was much below par.

It was thought best, however, to operate, and in the presence of Drs. Farnham, Pinkney, Grant, and others, the needles were used in the same manner as in the previous case. Coagulation was readily produced, but owing to some unpleasant symptoms in the respiration of the child the needles were withdrawn (as the progress of the case subsequently attested) a little prematurely.

Absorption set in very slowly indeed, and after a few weeks its effects were barely perceptible. After a couple of months it was evident that the circulation in one portion was beginning to be re-established, but the mother refused to allow anything more to be done for the little patient. It should be stated that on the night following the operation, the child was allowed to lie upon its back with the hard enlargement of coagulated blood entirely unprotected. Subsequently a soft circular ring was prepared and placed around the tumor, but the irritation already caused by the pressure was followed by slight ulceration and discharge.

This, however, healed in the course of two weeks, but it undoubtedly contributed towards the general unsatisfactory result. The slowness with which the absorbing process was carried on is to be attributed undoubtedly to impaired nutrition, and the re-establishment of the circulation mainly to the unfortunate necessity of cutting short the operation.

ARTERIAL ERECTILE TUMOR FROM BIRTH IN A CHILD FIFTEEN MONTHS OLD.—COMPLETE RECOVERY UNDER ELECTROLYZATION.

Case III.—In the case of a little child fifteen months old, upon whose face near the angle of the lower jaw a small erectile tumor had existed from birth, electrolysis was completely successful. The patient was placed under the influence of chloroform, and two platinum needles, insulated to within one-third of an inch of the points, and connected with the positive pole, were introduced into the two lower quarters of the tumor; while two steel needles, connected with the negative pole and insulated in a similar manner, were thrust into the two upper quarters. The current from twelve medium-sized cells of a zinc-carbon battery was allowed to pass for ten minutes, at the end of which time the coagulation was complete. Absorption of the clot rapidly became manifest, and in four months it had entirely disappeared, leaving no scar.

In subsequent operations we have not hesitated to use steel or gilded needles for the positive pole, since the oxidation which these metals undergo in all probability tends to accelerate coagulation.

SUBCUTANEOUS ERECTILE TUMOR TREATED BY ELECTROLYSIS.—SUBSEQUENT SLOUGHING.

Case IV.—At the request of Dr. Geo. K. Smith, we operated, Nov. 22, 1871, on a case of subcutaneous erectile tumor just over the inner angle of the eye in a child sixteen months of age. The tumor, which was about the size of a hazel-nut, could easily be compressed. The child was thoroughly etherized with the assistance of Dr. F. H. Colton, and three insulated needles were

inserted into the tumor—two connected with the positive, and one with the negative pole.

The current was from sixteen weak cells; the *séance* twenty minutes. The color of the tumor changed during the operation and became hard through the coagulation. Subsequently the tumor sloughed at certain points, and the result was not satisfactory, since a deformity was left that may be permanent. The mistake we made was in using too strong a current and unduly prolonging the operation. In our desire to avoid repeating the operation as had been found necessary in other cases, we went to the other extreme.

The delicate skin of the child was so affected by the action of the current that sloughing ensued in spite of the insulation of the needles.

This mistake is one that can be easily avoided.

NÆVUS IN A CHILD CURED BY ELECTROLYSIS.

Case V.—April 1, 1872, we were requested by Dr. E. Bunker, of Brooklyn, to operate on a small nævus on the neck of a child eight weeks old. The tumor was situated just below the chin, and was one-third of an inch in diameter.

A current from eight zinc-carbon cells was applied into the tumor by means of a small needle (uninsulated) connected with the negative pole, while a sponge electrode attached to the positive was applied to the surface of the body.

Immediately the diseased spot began to decompose and to change in color, and ultimately disappeared. The sitting was continued but four minutes. No anæsthetic was employed.

Dr. Bunker informs us (June 15) that there are signs of reappearance of the growth.

BRONCHOCELE (GOITRE).

In the treatment of goitre etherization is not necessary, provided a needle is used that can be introduced with ease. The ordinary glover's needle (small size) of the fancy stores, we find enters the skin easier than any other shape that we have tried. It is not necessary to insulate the needles for goitre; but hard rubber can be melted on and allowed to cool, in cases where insulation is required. To introduce the round needles into the skin of the neck is a matter of great difficulty.

SIMPLE OR ADENOID GOITRE IN A CHILD AGED 14.—STEADY DECREASE IN SIZE UNDER ELECTROLYTIC TREATMENT.

Case VI.—L. W., a girl aged 14 years, first observed four years since a slight enlargement of the thyroid gland. It rapidly increased in size, until Dec. 5, 1871; when she presented herself for examination it was 1½ inches in depth and 2 inches in width, reaching to the anterior border of either sterno-cleido mastoideus muscle. The mass was quite movable and did not in any way cause inconvenience, excepting when she attempted to sing. Iodine, both internally and externally, had been used without appreciable benefit. For the first two months localized *external* galvanization repeated twice a week was alone tried, resulting in no diminution in the size of the swelling, but in a very decided alleviation of the distressing sensation of strangling, which invariably occurred whenever she attempted to sing.

Subsequently the needles were introduced, and to this date the tumor has steadily decreased in size, until it is now, June 1, one-quarter its original size, and the indications are that it will entirely disappear. The needle (a small glover's needle), has been introduced some twenty times, but as the pain produced is very slight no chloroform has at any time been used.

FIBROUS GOITRE OF FOUR YEARS' STANDING IN A WOMAN AGED TWENTY-NINE.—CONSIDERABLE DIMINUTION IN SIZE UNDER EXTERNAL GALVANIZATION AND ELECTROLYZATION.

Case VII.—K. M., an unmarried woman, aged 29, observed some four years ago a slight swelling over the right side of the pomum Adami. The growth was rapid and soon involved both lobes of the thyroid gland. By accurate measurement the distance from the posterior border of one sterno-cleido-mastoid muscle to the posterior border of its fellow was found to be seven and one-half inches.

Five applications of localized galvanization during the three weeks following reduced the above measurement one-half an inch. From the date of the last external application (March 18, 1872), a needle was introduced and the current allowed to act about fifteen minutes. Six similar applications during the following four weeks reduced the distance from the two given points to six inches. The patient after this came but two or three times until June 23, when ether was administered, and three needles and eighteen zinc-carbon cells were used. The operation was continued fifteen minutes, when two needles were withdrawn and the cells increased to twenty-three, and the current allowed to pass eight minutes longer. The patient recovered rapidly from the effects of ether, but, unfortunately, never returned to report progress.

LARGE CYSTIC TUMOR IN THE RIGHT AXILLA SUCCESSFULLY TREATED BY ELECTROLYSIS.

Case VIII.—Mary M., aged 33, noticed three years ago a swelling in the right axilla, which gradually increased until Feb. 29, 1871, the date of her presentation for treatment, when it was about one-half the size of her clenched fist. The swelling was hard and movable. Alternate localized galvanization and faradization (external applications) were essayed for one month, greatly relieving the pain and slightly reducing the enlargement.—April 2d. The needles were attempted—one being used at each *séance*. The operation was repeated eight times until June 26, when the tumor was no larger than a small chestnut. She returned no more to the Dispensary, for the reason, doubtless, that absorption had completed its work. Another result of treatment is worthy of notice. The patient had borne four children, and while nursing the first had suffered from a fissured nipple on the side where the tumor was seated, and in consequence was, during the whole period of nursing, unable to give nourishment to the child from the affected side. With subsequent children the quantity of milk secreted by this breast was hardly one-half of that given by the other.

At the time of our first operations she was nursing a child twelve months old, and thus gave us an opportunity to demonstrate the value of electrization in increasing the lacteal secretion. The quantity of milk secreted rapidly increased until it quite equalled the amount produced by the healthy side.

CYSTIC TUMOR OF FOREHEAD OF FORTY YEARS' STANDING.—IMMEDIATE AND PERMANENT CURE BY ELECTROLYSIS.

Case IX.—Mrs. H., aged 60, we first saw in consultation with Dr. A. W. Catlin, of Brooklyn, Nov. 9, 1871.

For forty years she had been afflicted with a tumor on the forehead, which, in appearance and size, and in its feel and compressibility at the time we saw it, exactly resembled a ripe Isabella grape. This appearance had not, however, been constant; its size varied, and at one time after stooping it had considerably enlarged, and a vein connected with it and leading to-

wards the upper part of the nose became swollen and prominent.

Whether the enlargement was erectile or cystic was a matter of doubt.—Dr. A. B. Crosby, who saw the case with us, regarded it as cystic. The patient had refused to submit to any operation for the radical cure of the tumor—partly on account of fear of hemorrhage—and consequently, had worn the unpleasant deformity the greater portion of her life.—*Nov.* 11, 1871, with the assistance of Drs. Catlin, Crosby, Cooper, and Wyckoff, local anæsthesia was used, and two small insulated needles were inserted into the tumor near the base, one pole connected with the positive and the other with the negative pole of ten cells of a portable Galvano-Faradic Co. zinc-carbon battery. Immediately the color of the tumor began to lighten, through the change of its fluid contents into oxygen and hydrogen gases, and in five minutes the whole surface was almost colorless, and the tumor was much distended. The needles were now withdrawn; there was no hemorrhage, but the gases began to escape at the places where the needles were inserted. Dr. Crosby now used a little pressure, and the tumor flattened with more escape of gas. Under repeated pressure still more gas escaped; and in ten minutes from the beginning of the operation the tumor was perfectly flattened. Gradually the residuum of the tumor disappeared, and in a few weeks scarcely a trace of the long-standing deformity existed.

EPITHELIOMA INVOLVING ONE-HALF THE LOWER LIP.—RECOVERY UNDER ELECTROLYTIC TREATMENT.

Case X.—Mrs. J. C., aged 65. In September, 1871, a little hard lump, the size of a pea, appeared on the left side of the under lip. By Jan. 19, 1872, it had extended from the angle of the mouth along the lip to the median line. The surface presented a warty appearance, was exceedingly hard, and bled readily. Localized galvanization (external) dissipated almost completely the excessive pain in the diseased part. On Jan. 26, five uninsulated needles were introduced into the lip, *around and beneath* the tumor, so as to entirely separate the healthy from the unhealthy tissue, and a current of considerable tension from eighteen cells was allowed to pass for twenty-five minutes. Equal parts of chloroform and ether were administered.

Inflammation and suppuration followed, and in two days the entire tumor had sloughed away.

By Feb. 2 the inflammation had subsided, and the surface was covered with healthy granulations. Improvement continued until Feb. 23, when the surface had entirely healed, and the patient was discharged as cured, with a well-formed lip.

LARGE UTERINE FIBROID. — DISSIPATION OF PAIN AND SOME DECREASE IN THE SIZE OF THE TUMOR UNDER INTERNAL FARADIZATION AND ELECTROLYSIS.

Case XI.—Isabella McV. came to the Dispensary for examination and treatment, March 7th, 1871.

Some eighteen months previously she first noticed a slight enlargement occupying the right iliac region. It gradually increased in size, and on examination we found a tumor extending from the fundus to the os uteri. The menses and secretions were normal, but the associated pains in the hip and down the right limb were of the severest character. The woman was sleepless, without appetite, and suffered from continual vomiting. The faradic current was first used by applying a large flat electrode connected with the positive pole, directly over the upper portion of the tumor, while the negative electrode, so constructed as to be readily introduced, was held firmly against the right side of the cervix uteri. The above treatment in connection with an occasional general application was repeated twice a week for nearly four months, resulting in great improvement to her general condition and effectually allayed the acute pain from which she had suffered.

No effect was produced on the size of the growth, except that further increase seemed to be checked. In the latter part of June electrolysis was resorted to. A long needle insulated to within one inch of the point was thrust into the tumor as it could be felt at the right side of the cervex uteri. The current from twenty-five cells was allowed to pass for fifteen minutes, and the operation was repeated twice a week.

After a few applications a thick dark-colored discharge appeared, and when this flow was most abundant the patient's health was correspondingly better.

After two months of this treatment the patient was lost sight of, but the tumor had decreased decidedly in size and become much softer, while her general health remained good and her limbs free from pain to the last visit.

INDOLENT ULCER OF THE ARM.—RECOVERY UNDER LOCAL GALVANIZATION.

Case XII.—Mary H., aged forty, while moving, May 1, 1871, fell and injured the arm immediately above the external condyle. The pain was excessive and continued to distress her for several weeks, when a small ulcer made its appearance and enlarged until it was two inches in diameter.

The patient applied for treatment, July 18.

The ulcer was covered with a dark-colored scab three-fourths of an inch, partly lifted from its resting-place by exuberant and unhealthy granulations.

The scab was removed, and a wet cloth in connection with the positive pole was applied to the diseased part while the negative was placed on an indifferent but approximate part. The galvanic current was used. She suffered no more pain after the second *séance*, and as the applications were repeated the ulcer rapidly healed, until August 30, when the part was covered by sound healthy skin.

SYPHILITIC ULCER.—RECOVERY FOLLOWS THREE OPERATIONS BY ELECTROLYSIS.

Case XIII.—Catherine McK., aged forty, suffered three years since from a number of syphilitic tubercles and ulcers about her hips, thighs, and vulva. They persisted a long time and gave her much annoyance, but finally healed with the exception of one on the inside of the thigh. It was elevated nearly one-half an inch above the surrounding surface, was excessively painful, and discharged an offensive secretion. A needle connected with the positive pole was passed through the base of the elevation, and a current of moderate tension allowed to pass for a few moments. This application dissipated all pain, and after the third *séance*, given several weeks after the first, soon healed, and the patient was discharged from the dispensary.

(To be continued.)

Operation for Cataract.—Wecker, the Paris ophthalmologist, from the 1st of July, 1871, to the 1st of January, 1872, operated ninety-five times for cataract in his hospital and private practice, failing in only three of the cases to restore vision.—Paris Corres. of *Nashville Jour. Med. and Surgery.*

Progress of Medical Science.

Leucocythæmia Occurring in a Pig is described in the *Archiv für Thierheilkunde*, by Bollinger. The animal having been killed after four days of illness, the spleen and kidneys were found to be hypertrophied, the cortical layer of the latter showing numerous hemorrhages. The liver was nearly twice its natural size, and pale. The glandular epithelium of both liver and kidneys had undergone fatty degeneration. Masses of leucocytes the size of hemp-seeds were found scattered here and there in the lungs. The proportion of white to red corpuscles in the splenic vein was 1 : 4; in the renal veins, 1 : 5.

Pulmonary Consumption.—R. B. Maury, M.D., Prof. in Memphis Medical College (*Am. Practitioner*), in appealing to the clinical history of tubercle, calls attention to the following facts: 1st. That the commencement of so-called tubercular deposit is invariably marked by fever, or a rise of the axillary temperature above 90° F. 2d. That entire restoration to health in these cases is not uncommon; a fact which is well established by general experience. The clinical history of chronic tuberculosis sustains the idea of an inflammatory process from beginning to end, but is not intelligible if it is supposed that its pathology consists in the development of a neoplasm. Most of the cases of consumption met with are the result of neglected colds.

In conclusion he remarks that he has repeatedly verified the experience of Niemeyer, in regard to the good effect of absolute rest, counter-irritants to the chest, the administration of Heim's pill, the avoidance of stimulants, and the use of such food as is easily digested. Under this treatment the fever subsides, the cough lessens, and digestion is improved. Stimulants, nutriment, and exercise, with change from sedentary to active life, may then very properly be recommended.

Rachitis.—John S. Parry, M.D, Philadelphia (*Am. Jour. Medical Sciences*), is not prepared to adopt the view that rickets is hereditary, though this opinion has been supported by some illustrious authorities, such as Herring, Ritter von Rittershain, Hennig, Stewart, Whitehead, Merei, Aiken, Willshire, Niemeyer, Vogel, and Hillier. Meigs and Pepper believe that there is no evidence to show that it is ever hereditary. Holmes is of the same opinion. Before this Gregory had spoken more positively upon this point, saying that the constitution of the parents has little to do with the production of the disease; but the most positive authorities in regard to the matter are Routh, E. Smith, and Sir William Jenner, all of whom deny that it is even transmitted from parent to child. Dr. Parry has several times seen women who presented indubitable evidences of having suffered from rachitis in early life, and who had borne large families, none of whom presented any manifestations of the disorder. It has been spoken of as a diathetic disorder, but it is not diathetic as struma, tuberculosis, and syphilis are. In other words, the child is not born with a predisposition to rickets, except so far as it is influenced by age. The most potent and frequent causes of the disease is the use of improper food. Long ago it was noticed that this affection might manifest itself after any acute disease which prostrated the child; and that rickets is debility modified by age (Gee's idea) does not seem so far wide of the truth. According to the author's experience, sex has no influence in causing the disease.

Hectic Fever.—Francis D. Condie, M.D., Philadelphia (*Am. Journal Med. Sciences*), says that the presence or absence of hectic fever furnishes no certain evidence of the presence or absence of pulmonary disease, and under no circumstances is it of any value in the establishment of a correct diagnosis between the tubercular and what he has denominated the spurious form of pulmonary phthisis, it being as often present in the one as in the other.

A Hemorrhoidal Suppository.—Dr. Henry M. Field Newton, Mass. (*Journ. Gynæcological Soc.*), recommends this formula for a suppository in hæmorrhoidal cases: R. Acid. tannic., gr. v.; Ext. belladon., gr. ss-j.; Butyr. cacao, q. s.

New Method of Making Beef-tea.—Dr. H. C. Wood (*New Remedies*, April, 1872) has invented the following process for making beef-tea: Take a thin rump-steak of beef, lay it upon a board, and with a case-knife scrape it. In this way a red pulp will be obtained, which contains pretty much everything in the steak, except the fibrous tissue.

Mix this red pulp thoroughly with three time its bulk of cold water, stirring until the pulp is completely diffused. Put the whole upon a moderate fire, and allow it to come slowly to a boil, stirring all the time to prevent the caking of the pulp. As soon as it has boiled remove from the fire. Season to taste. In using this do not allow the patient to strain it, but stir the settlings thoroughly into the fluid. One to three fluid ounces of this may be given at a time.

Tic-douloureux.—Dr. Bartholow, Cincinnati, Ohio (*The Clinic*), reported a case of epileptiform tic-douloureux of six years' duration, cured by the hypodermic injection of morphia and the iodide of potassium.

Backward Dislocation of the Wrist.—P. S. Conner, M.D., Cincinnati, Ohio (*The Clinic*), relates a case of backward dislocation of the carpal bones, accompanied with extensive laceration of the ligaments of the wrist-joint. The patient, æt. 22 years, a brakeman by occupation, fell or was thrown from a freight car, the brake of which he grasped with his right hand in an attempt to save himself.

Vaccine Virus.—J. Henry Carstens, M.D., Detroit, Mich. (*Detroit Review of Medicine*), advocates this method of preserving vaccine matter: The scab is carefully powdered in a glass mortar, and kept in a fifteen-grain vial tightly corked. When wanted for use a few grains are moistened with a drop of water, and applied with a lance to the slightly denuded skin. The powder will keep for some months at least. In this way he has been able to vaccinate from ninety to one hundred persons with one scab. This mode is to be recommended for the following reasons: 1st. It is more economical: more persons can be vaccinated with a scab than by any other way. 2d. The per cent. of failures is less than by any other way. 3d. The operator can vaccinate with more dispatch. 4th. There is little danger of erysipelas, sloughing, etc.

Emmenagogues.—Dr. Parvin (*Am. Practitioner*), in answer to a Nebraska correspondent, gives the subjoined formulas for emmenagogue pills. In anæmic amenorrhœa, one composed of equal parts of dried sulphate of iron, white turpentine, and aloes. The pill may weigh two or three grains, and may be given twice or thrice daily.

Another may be made of equal quantities of rue, savine, and ergotine, and half as much either of aloes or of gamboge. The pill may weigh from three to four grains, and two or three may be given three times a day.

Early Blistering in Pneumonia and Pleurisy.—S. S. Herrick, M.D. (*Rich. and Louis. Med. Journal*), has prepared a table of twenty-four cases of pneumonia and pleuro-pneumonia, with only three deaths, in which early blistering was resorted to. The beneficial effects were attributed chiefly to the promotion of absorption of effused products through osmosis, by increasing the flow of blood on the stimulated surface and in the adjacent tissues.

Hæmoptysis.—From the reliable analysis of the one thousand cases by Dr. Williams, founded upon the "Brompton Reports," we learn that hæmoptysis is more frequent as three to one before softening in pulmonary tuberculosis than after that process has taken place:

Stage.	No. Cases Hæmoptysis.	Moderate.	Per Cent.
1	187	20	13.95
2	65	16	24.61
3	31	21	67.74

An Unguent for Multiple Buboe.—R. C. Brandeis, M.D., Vienna Correspondent of the *Richmond and Louisville Med. Journal*, writes that Prof. Zeissl. Chief Physician Second Division for Syphilitics in the Vienna General Hospital, has achieved much success in the treatment of acute and subacute inguinal and femoral buboes by the application of a solution of acetate of lead to the glands; and in the case of a multiple buboe the following ointment of iodide of lead will afford speedier relief than the sugar of lead compress: ℞. Plumbi iodati, ʒ j.; Ext. belladonnæ, ℈ij.; Emplast. diachyli, ℥ j.; Unguent. elemi, q. s. to make a soft plaster. S. ointment.

Muriate of Ammonia in Bronchitis, Catarrhal Pneumonia, etc.—In obstinate acute bronchitis, after the first intense stage; in catarrhal pneumonia, both of children and adults; in bronchorrhœa, and also in ordinary chronic bronchitis, Dr. H. C. Wood, Jr., Phila. (*New Remedies*, April, 1872), has obtained more apparent good from the use of muriate of ammonia than any other remedy. The best formula for giving the muriate with which he is acquainted is as follows:—℞. Ammoniæ muriat. ʒ ij.; Ext. glycyrrhiz., ʒ j.; Mucil. acaciæ, Aquæ, āā f ℥ iij. M. S. Tablespoonful for an adult every two hours; teaspoonful for a child, a year old, every three hours.

When patients object to the mixture of sweet and salt the following is to be preferred: ℞. Ammoniæ muriat. ʒ ij.; Aquæ, f ℥ vj. Dose as before.

When the cough is very annoying $\frac{1}{10}$ of a grain of sulphate of morphia, or 10 to 15 minims of tincture of hyoscyamus, may be added to each dose.

In bronchorrhœa the following may at the same time be used by inhalation twice or thrice daily. Take of Sat. solution of alum, ʒ vj.; Tr. hyoscyamus, ℥ ss. M.

Cholera Remedy.—*New Remedies* for April, 1872, contains the following cholera prescription, a favorite one of Dr. H. Hartshorne, of Philadelphia: ℞. Chloroform, Tinct. opium, Spts. camphor, Spts. ammonia aromatic, āā f ʒ iss.; Creasote, gtt. iij.; Oil of cinnamon, gtt. viij.; Brandy, f ʒ ij. Mix. Dilute a teaspoonful with a wine glass of water, and give two teaspoonfuls every five minutes, followed by a lump of ice.

Ovarian Cyst in a Child Eight Years Old.—Dr. C. G. Goodrich, Minneapolis (*Northwestern Medical and Surgical Journal*), reports a case of ovarian cyst in a child eight years of age. The child was tapped three times. His attention was called to the case during convalescence from typhoid fever; the tympanitic distention of her abdomen did not disappear as in others of the family who had also been ill with fever. The autopsy revealed an ovarian cyst, with extensive adhesions to the peritonæum and liver.

Hemiplegia in a Syphilitic Patient.—J. Hughlings Jackson, M.D. (*Trans. Clinical Society*, London), relates a case of right-sided hemiplegia, which was produced as follows:—The middle cerebral artery, or some branch of it, was the subject of a syphilitic growth; its channel became plugged, and as a consequence there was hemiplegia from softening of the motor tract. In this case there was nearly complete loss of speech, without much loss of consciousness—the former being caused from softening of the convolutions.

Treatment of Diphtheritic Croup.—In a paper on "Diphtheritic Croup and its Treatment," read before the Buffalo Medical Association, by F. W. Bartlett, M.D. (*Buffalo Medical and Surgical Journal*), several cases of diphtheritic croup are detailed, in which a small blister over the nucha, and common salt dried and powdered, blown by the aid of a tin tube into the fauces, were of great service to the patients in relieving the croupal distress. It is important not to heal the blister by any application. Let it heal in its own way. If a blister is to be applied it should be at the earliest possible stage of the malady, so as to arrest if practicable the initiatory morbid changes in the mucous membrane of the larynx and the trachea. In later stages of the disease it is far less likely to succeed, and if successful, the respiration and voice particularly are much more slowly restored. It is to prevent suffocation that the trial of the revulsive and eliminating plan is urged.

Treatment of Cerebro-Spinal Meningitis.—Dr. N. S. Davis, Chicago, Ill. (*Medical Examiner*), uses with success in this disease the calabar bean, either alone or in combination with ergot. He believes that such remedial agents as have the power to diminish *excitability*, and at the same time increase the vascular tonicity, exert the most favorable influence over the active stages of its progress. Such are the calabar bean, cannabis indica, gelseminum, ergot, etc. In the active stage of the disease he has not found either opiates or quinine to produce any favorable effects.

Cerebral Abscess.—J. F. Weeds, surgeon U. S. army (*Nashville Jour. of Medicine and Surgery*), publishes a case of the comparatively rare disease—cerebral abscess. The patient was a lieutenant in the U. S. army, who was wounded in the forehead by a ball from a Colt's navy revolver. Feeling satisfied that his patient was dying, and that pressure was produced by a cerebral abscess, he trephined, and incised the dura mater, and plunged the knife into the cerebral substance. Half an ounce of dark-green and somewhat fetid pus flowed from the wound. The wound healed rapidly, and in two weeks the patient was walking about convalescent.

He mentions 214 recorded cases, including his own, in which there were only four recoveries, and one case the result of which was doubtful.

Dislocation of the Radius and Ulna Backwards in a Young Subject.—W. T. Briggs, M.D., Prof. of Surgery in the University of Nashville, Tenn. (*Nashville Journ. of Medicine and Surgery*), records a case of dislocation of the radius and ulna backwards, in a patient two and a half years old. He regards this instance as one worthy of report, as Malgaigne says that of 643 dislocations only one occurred under five years of age; and Hamilton, in his treatise on "Fractures and Dislocations," states that of 56 cases of dislocations of the radius and ulna, the youngest was five years of age.

In his case the reduction was easily effected by grasping the arm with one hand, and the forearm with the other, and after slight extension flexing the forearm; it slipped to its place with an audible noise.

Vaccination.—Dr. Henry A. Martin, of Boston Highlands, Mass. (*Journ. of the Gynæcological Soc.*), states that there have been at least 400,000 re-vaccinations made in this country with cow-pox (Beaugency) virus, and no case of death, erysipelas, or cases of post-vaccine variola have been reported among them. He also avers that ever since the introduction of vaccination at the "New York Dispensary," in every five hundred vaccinations made at that institution, and they number hundreds of thousands, one case of erysipelas will always occur.

Since the adoption of cow-pox vaccination (from stock derived originally from Dr. Martin), by that institution, there had been, up to September, 1871, about 4,500 vaccinations made, and not one case of erysipelas reported. Within the sphere of Dr. Martin's own practice and observation there have been, since his introduction of animal vaccination, no less than seven cases of erysipelas following vaccination, and several cases where it seemed to be threatened,—and all these, without exception, he says have been from vaccination with humanized virus, and invariably with that of the English Vaccine Institution.

It being difficult always to procure heifers of the requisite age, six months or thereabouts, Dr. Martin has made arrangements for a constant supply, a carload at a time from Maine, at present a constantly-changing herd of forty-one selected heifers.

Pruritus Vulvæ.—Dr. McGrath (*Canada Lancet*), ecommends the following lotion in pruritus vulvæ; it should be applied by means of a soft sponge after ablution, morning and evening: ℞. Biborate of soda, ʒ ij.; Hydrochlorate of morphia, gr. xx.; Hydrocyanic acid, ʒ j.; Glycerine, ʒ j.; Distilled rose-water, ʒ viij.

Introduction of Corrosive Sublimate Hypodermically, in Syphilis.—Dr. Carl Proegler, of Naperville, Ill. (*Chicago Medical Jour.*), thinks, with Prof. Lewin of Berlin, the subcutaneous injection of corrosive sublimate in syphilitic cases is decidedly preferable to internal administration, fumigation, inunction, or introduction of mercurial suppositories. From statistics given by Prof. Lewin, Surgeon-in-chief of the syphilitic wards of the Charity Hospital, Berlin, where upwards of 2,000 patients have been treated by the subcutaneous method with the mercurial sublimate, it was found that from 1½ to 3 grains of the bichloride is all that was needed for the average of cases, including the most obstinate forms of tertiary syphilis. The quantity used daily depends somewhat on the gravity of the case. Ordinarily, doses from $\frac{1}{12}$ to $\frac{1}{4}$ of a grain are administered subcutaneously once each day. If the prodromes of salivation occur, a pause of three or four days may take place, when the treatment may be resumed. When a patient exhibits a peculiarly sensitive diathesis, and whenever the sublimate injection is followed with pain, a small quantity of morphine may be added as a corrective. In this class of cases he has added the morphine, or applied externally a chloroform liniment, and never had any irritation or abscesses resulting.

Prof. Von Siegmund (*Berl. Klin. Woch.*), in commenting on his 200 cases recently treated with subcutaneous injections of sublimate, says that there occurred but two abscesses in all, which resulted mainly from unskilful insertion of the liquid. He has seen no affection of the gums, no disturbances of the respiration or circulation, nor any other mercurial effects of any moment.

Dr. Proegler treated last year, in the German army, over 150 cases of syphilis by this method with success, and also, conjointly with Dr. Gale, of Aurora, over 40 cases in private practice.

Compound Fracture of the Skull.—Thomas R. Dupuis, M.D. (*Canada Lancet*), relates the case of a boy, aged 10 years, who received a severe compound fracture at the middle of the superior portion of the left parietal bone, with considerable laceration and loss of a teaspoonful of the brain, and finally recovered. The chief points of interest in the case were, paralysis on the same side on which the blow was received, and anasarca. The occurrence of the paralysis on the same side on which the blow was received, he accounts for by the supposition of a *contre-coup*, by which laceration of some small vessels was produced, and an effusion into the base of the brain on the right side. The origin of the anasarca during the period of convalescence he attributes to imperfect action of the left kidney, caused by defective innovation. It may easily be supposed that the complete paralysis of one side of the body would affect the functions of the kidney on that side sufficiently to produce the anasarcous state observed in this case.

Eucalyptus.—Dr. David Wooster, San Francisco, Cal. (*Pacific Med. and Surg. Journ.*), calls attention to the following medicinal virtues of the fluid extract of eucalyptus, which he has extensively used in the U. S. Marine Hospital. It is a diuretic of rare virtue, and may be administered when most of the diuretics now in common use are inadmissible, an aromatic tonic, and has notable restorative effects in low states of the system, as in typhoid fever, diarrhœa, and dysentery. In vesical catarrh it alone cures. In spasmodic stricture, and in all affections of the mucous membranes, it relieves with great promptness. As an external application in chronic ulcers it has great value.

Ancient Methods of Delivery.—Dr. Wm. Goodell, Phil., Pa. (*Am. Journ. Obstetrics*), in order to bridge over a gap in the history of obstetrical art, gives, with five woodcuts, the histories of some ancient methods of delivery which are not known to the profession at large. The history is noted from the time when "the King of Egypt spake to the Hebrew midwives," in Exodus i. 15, 16, down to the days of Hippocrates and Albucasis, when tossing up a woman in a blanket was recommended by the latter, in malpositions. The whole subject is a very interesting one, especially to the obstetrical historian.

Fungus as a Cause of Whooping Cough.—Dr. Letzerich (*Quarterly Journ. Microscopical Science*). thinks he has discovered a form of fungoid growth which vegetates in the epithelium of the air-passages, and by its irritation causes the convulsive attacks of coughing. The expectorated mucus in patients suffering from this disease is said to contain masses of brownish-red spores, with occasional threads of mycelium, which, in later stages of the disease, become very abundant. The spores are colored blue by iodine and sulphuric acid. These observations were confirmed first by cultivation of the spores on pieces of bread soaked in milk, and further, by introducing masses of the fungous growth thus obtained into the trachea of rabbits. This was effected by tracheotomy, but the animals rapidly recovered from the effects of the operation, and in a short time became affected with a cough of a very violent and noisy character; in fact, a genuine whooping-cough.

The rabbits thus affected were killed, and their air-passages and lungs found to contain an enormous quantity of the same fungus as that met with in the sputa from human whooping-cough; and in fact, the mucus expectorated by the rabbits showed precisely the same appearance.—*Am. Journ. of Obstetrics.*

Hydrate of Chloral in Traumatic Tetanus.—Dr. Joseph R. Beck, of Fort Wayne, Ind. (*St. Louis Med. and Surg. Journal*), has compiled 35 cases of traumatic tetanus, and reports one case of his own, 30 of which were treated by chloral alone; 2 by chloral with the continuous current; 1 by belladonna and bromide of potassium; 2 by chloral and calabar bean; and 1 by chloral, belladonna, and ice to spine. Of those treated by chloral alone, 16 recovered; the two cases treated by chloral and continuous current recovered; one of the cases treated by chloral and calabar bean recovered; the case treated by chloral, belladonna and potas. bromid. got well; chloral, in connection with belladonna and ice to the spine, proved successful in the one reported case. He does not propose to discuss any of these conclusions, inasmuch as the statistics at this time at the command of the profession are too meagre as to all other remedies than the calabar bean and hydrate of chloral, and are too recent to admit of a true estimate of the latter. As far, however, as the statistics contained in his paper are concerned, Dr. Beck believes that the remedy discussed makes a very favorable exhibit, and is disposed to give it the preference over any and all other remedies in this disease. Perhaps, under a peculiar state of circumstances, he would conjoin other treatment, especially the continuous electric current, but his chief reliance would be placed upon chloral. In a future paper he will compare the results attained by the physostigma venenosum with those credited to the hydrate of chloral; and thus add a page of comparative statistics to the general fund.

The Power of Cold in the Treatment of Gonorrhœa.—Dr. Gustave A. Shane, of Salem, Ohio, late of U. S. N. (*Med. and Surg. Reporter*), reports twenty-three cases of gonorrhœa which were quickly cured by the aid of cold—ice to the perinæum—and an alkali to secure its reaction upon the urine. Once he regarded, with others, gonorrhœa one of the most unsatisfactory and perplexing diseases to treat; but he now finds, if seen in the forming stages, no difficulty in subduing it in from four to ten days without any resulting gleet, chronic prostatitis, chronic irritability of the bladder, stricture, and such other sequences as followed the old copaiba and "*squirt-gun*" methods of treatment. When he treated this disease by the use of copaiba, cubebs, the terebinthinates and caustic injections—in the same number of cases, the maximum duration of treatment was one hundred, the minimum nine days, the average twenty-six, with six cases of the above-mentioned sequences.

Mixed Vapors.—Dr. T. D. Davis, of Dayton, Ohio, (*Med. and Surg. Reporter*) advocates the anæsthetic mixture recommended by the committee on anæsthetics of the American Medical Association. Its advantages being: The small quantity required; the rapidity of its action; the shortness of the stage of exitement; the absence of distressing after-effects, etc. The formula is as follows: Alcohol, 1 part; chloroform, 2 parts; and ether, 3 parts.

Management of Cerebro-Spinal Meningitis.—J. Maclay Armstrong, M.D., Edwardsville, Ill. (*Med. & Surg. Reporter*), writes that after the relief of the brain-symptoms, spotted-fever should be treated as any ordinary case of sub-acute rheumatism. He uses the following mixtures: ℞. Tinct. xanthoxylum, Tinct. cimicifuga rac., Tinct. guaiacum, āā ʒ ij.; Tinct. colchicum rad., ʒ j.; Potas. acetas, ʒ j.; Syr. simplex, Spts. vin. gallici, āā ʒ ij. M. Sig. A dessert-spoonful every four hours.

℞. Quin. sulph., gr. xj.; Tinct. ferri chlor., ʒ ij.; Syr. simplex, Aquæ menthe pip., āā ʒ j. M. Sig. A dessert-spoonful three times a day, with Dover's powders at night if necessary.

He has had under his care 32 cases of this disease; 3 proved fatal within forty-eight hours; the remainder recovered. He is also convinced that this disease should be known as cerebro-spinal rheumatosis.

Sick Headache Treated by Apocynum Cannabinum.—Dr. John Murray, of London (*Lancet*), has had under his care, at Middlesex Hospital, cases of sick headache of an hereditary character which were much benefited by ten-minim doses of tincture of Indian hemp three times daily, between the attacks.

Prolapsus of the Urethra.—Guersant (*Med. News and Library*) alludes to this not very uncommon affection in little girls, which authors mention but little, or have nothing at all to say. He has seen at least a dozen or fifteen cases of it, from the age of two to twelve, in twenty years of hospital and private practice. It is advisable to relieve little girls of this affection, and by excision restore them speedily to their normal condition. There will be a little hemorrhage, which the application of cool water may check, and which may be arrested with the perchloride of iron diluted with water, or else by a small tampon of agaric steeped in this mixture, and applied for several minutes on the wound resulting from this excision. Washes of coal water, and a few applications of a pencil of nitrate of silver, suffice to procure cicatrization of the wound. The little patients suffer for a few days in urinating, but this does not last. In one of his cases hemorrhage occurred which could not be arrested with the perchloide, and he had, therefore, for twenty-four hours to keep a bladder, filled with ice, over the hypogastric region, and in front of the vulva. This last method succeeded perfectly. In this little girl, 10 years of age, the tumor dated from about the age of four, and was raw before the operation.

Carbolic Acid in Scarlatina.—Dr. Chapin (*Mich. Univ. Med. Journ.*) is very partial to the internal use of carbolic acid, and has come to consider it almost a specific in this disease. He is accustomed to use something like the following formula:

℞. Acid. carbolici, Tr. opii, Ætheris chlor., āā ʒ j.; Glycerinæ, Aquæ cinn., āā ʒ ij. M. Sig. A teaspoonful every four hours. He also uses the acid as an application to the throat.

The Prevention of Scarlet Fever.—Dr. George Johnson, of London, in a recent clinical lecture, spoke as follows in regard to the prevention of scarlet fever: A sufferer from scarlet fever, for a period of about a month from the commencement of the disease, is continually throwing off from his body a material poison, which has the power of conveying the disease to others. The poison is chiefly contained in the discharges from the throat and nose, and in the scales which are thrown off from the skin. It is probable that a portion of the poison may pass off by the bowels, and another portion by the kidneys. That the inflammation of the kidneys, which not unfrequently complicates the disease, is the result of an effort to eliminate the poison and its products, can scarcely be doubted; the epithelial desquamation within the uriniferous tubes being exactly analogous to the epidermic desquamation on the surface of the skin.

Now, taking these facts as the basis for our practice, let us consider what we have to do when a case of scar-

let fever occurs in a private house or in a public institution. Our object is twofold: first, to conduct the patient safely through the disease; and, second, to prevent the extension of the disease to other inmates. One of the main objects of preventive treatment is to disinfect the poisonous emanations from the body at the earliest possible period after their formation. A basin containing Condy's fluid, or carbolic acid, or chloride of lime, should be kept by the bedside for the patient to spit into. The mouth and throat should be frequently gargled with dilute Condy's fluid. It is better, as Dr. William Budd suggests, that, in place of pocket-handkerchiefs, bits of clean rag should be used to wipe the mouth and nose, and that these when once used should be burned. The discharges from the bowel and kidney are to be received on their very exit from the body into a vessel containing some disinfectant—carbolic acid, Condy's fluid, or a solution of sulphate of iron. The patient's bed and body linen, immediately on its removal, should be immersed in boiling water, and subsequently in water containing carbolic acid.

The main outlet for the scarlet fever poison is through the skin. The skin-eruption and the subsequent scaling which form an essential part of the process of cure, are also the chief means by which the disease is conveyed to others.

It is essential for the patient's welfare that the eruption should be encouraged and not repressed. A warm bath once or twice a day, when the patient is not too ill to bear the fatigue, keeps the rash well out, favors the exit of the poison, prevents renal complications, and is usually most soothing and agreeable to the patient. After the bath, the whole surface of the body, including the scalp, in accordance with Dr. W. Budd's directions, may be anointed with camphorated olive-oil. It is doubtful whether the camphor has any disinfectant property; but the oil allays the troublesome itching of the skin, and it may have the yet greater advantage of entangling the poisonous particles of epidermis, and so preventing their ready diffusion into the air.

Frozen Beef Essence.—Dr. H. B. Hard (*Phil. Med. Times*) says that in a case of scarlet fever in a child, the patient could not be induced to swallow the beef-tea which was prescribed. The child being exceedingly fond of ice, the father suggested that if the beef-tea was frozen he might then be induced to take it in that form. The idea was carried out, and the child took the frozen beef-tea readily.

Sulphur Fumigations, etc., in Small-Pox.—F. Hjaltelin, M.D., Chief Physician of Iceland, Kekjavik, (*Boston Med. and Surg. Journal*), treats confluent small-pox by sulphur fumigations and sulphurous acid in water internally. The results have been most satisfactory.

Purulent Ophthalmia of the New-Born.—Dr. Guersant (*Med. News and Library*), at the very outset of the disease, drops into the eye three or four times in the twenty-four hours a weak collyrium of nitrate of silver—a grain and a half of this salt to half an ounce of water. If the disease has already reached its second or third stage, the physician may act more energetically and pass between the lids a small brush steeped in a somewhat stronger solution of the same salt. He has often derived advantage from passing the solid stick of nitrate of silver rapidly over the inner surface of the lids, and then causing to trickle into the eye either water acidulated with several drops of chlorohydric acid or salt-water. The excess of the nitrate is at once changed into the insoluble chloride, which becomes detached from the mucous membrane. In this little operation the attendant should act rapidly, and especially take every precaution not to touch the cornea, which is already slightly altered.

Removal of a Loose Cartilage from the Knee-Joint.—Dr. John D. Jackson, Danville, Ky. (*Cin. Lancet and Observer*), successfully removed, by a subcutaneous incision, a loose cartilage from the right knee-joint of an Irishman, 40 years of age.

He has collected, tabulated, and appended thirty cases of removal of loose cartilages from the knee-joint, showing two deaths to the thirty cases, which would scarcely justify Benjamin Bell in his recommendation of amputation, or Velpeau in his conclusion that one-third of those operated upon perished. Analyzing further the collection, with reference to the modes of operation, we find that there were two deaths, one amputation, and one anchylosis, to sixteen successes by the direct method of operation, and that there was one anchylosis to ten successes by the method of Goyraud.

Dr. Jackson thinks that a great majority of the profession much overestimate the gravity of wounds of this locality. In the case of his patient no excessive reaction followed, and in only every seventh case of others, which he has compiled, did it occur.

While searching for the records of cases of extraction of loose cartilages from joints, he came across a paper communicated to the Society of Surgery of Paris, by M. Larrey (*Lond. Lancet*, June 15, 1861), containing statistics relative to the success of the various operations undertaken for the extraction of false cartilages in or about the knee-joint. Out of a total of 170 cases of extraction, 131 were by direct incision, and 39 by the indirect or subcutaneous method.

No. of cases.	Cured.	Failures.	Deaths.
131	98	5	28
39	19	15	5

According to M. Larrey, this operation should never be performed, unless the following conditions be realized: 1st. Complete mobility of the false cartilage. 2d. Presence of pain, effusion in the joint, lameness, and other ill effects resulting from its presence in the articular cavity. 3d. Failure of palliative means. 4th. Express desire of the patient to undergo an operation, after all its dangers and difficulties have been fully explained.

Iodoform as a Neurotic.—Ephraim Cutter, of Boston (*Journ. Gynæcological Soc.*), relates cases of uterine diseases, in which the use of iodoform afforded relief as a neurotic.

Atropine in Syphilitic Iritis.—Dr. Chas. R. Drysdale, of London, Eng. (*British Med. Journal*), writes, that if it were not considered immodest in one who does not devote his attention to the important speciality of ophthalmic medicine to offer an opinion, he would like to give his experience as entirely corroborating the assertion made by Hugh Carmichael, Taylor of Boston, Hughes Bennett, and the late J. T. Lawrence, that there is no necessity for using mercury in specific iritis. In most cases of that affection he has found the frequent use of the four-grain solution of the sulphate of atropine topically to the inflamed eye all that is needed to effect a cure. Doubtless, especially in aged persons, adhesions sometimes occur and destroy vision; but the prognosis is usually very good. if ten-grain doses of the iodide of potassium are given, with the frequent use of the atropia-drop. It seemed to him that Mr. Ernest Hart's experiments are most valuable, and tend to settle this practical point. He was well aware that Messrs. Critchett, Hutchinson, and Couper were of a different opinion, and thus felt the responsibility of giving a hasty judgment.

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THE STREET-CLEANING DEPARTMENT.

Since the business of street-cleaning has been intrusted to the Police Department we have great reason to congratulate ourselves on the shifting of responsibility on a bureau that seems to be fully alive to the necessities of the present time. If the stupid legislature at Albany during the past winter has been productive of nothing else, we are, after all, justified in using such means to so desirable an end as the creation of this new Board. We had reason to expect much more when the flourish of political trumpets and the cry for radical reform ushered the charter of the Committee of Seventy before the public. There was among sanitarians some hope at first that the Health Department of our city would be reconstructed, so that it would more fully meet the requirements of the citizens. But all the provisions referring to this department were so muddled, so inconsistent, so irrational, so partisan, that it hardly needed the element of minority representation to defeat it. Then the amendment, known as the Palmer Charter, was concocted, with so little knowledge of the usual quibbling and trickery of legislation and of the ordinary provisions in laws, created during that very session, that its failure was a foregone conclusion. Last of all, as if by way of an apology for repeated failures, the present street-cleaning bureau was created, and thus far it has worked with such success that we, in common with others, who have been seeking for gold among so much dross, are unexpectedly satisfied with something which we can call judicious; something which is calculated, without the usual pretentious boasting of political reformers, to be productive of more good in promoting the health of the community and in preventing disease than the two proposed charters rolled into one.

The Board of Health had its jurisdiction as regards street-cleaning so hemmed in by restrictions as to leave it perfectly powerless for the accomplishment of anything save sprinkling disinfectants, and occasionally proving to the public its disposition to create political capital by cleaning a few of the filthiest thoroughfares in the fear of a pestilence. There was, as every observer well understood, none of that power, none of that centralization of authority, which gave any significance to their suggestions, or any tangible result to their gratuitous labors.

Under the new régime, however, the street-cleaning is reduced to a system which is as simple as it has proved itself effective. The powers are ample, the plan of inspection is trustworthy and thorough, and the punishment for violation of ordinances, trusted in its enforcement to the department of police, is prompt and just.

Recently the Superintendent of Police has given the public an earnest of the intentions of the department, in the direction of prevention as well as cure, by bringing to the notice of the public the existence of the ordinance concerning the throwing of garbage and the like in the streets. This law has been in existence for a considerable period, but for the want of the requisite authority, and a determination to put it into force, has failed of the good which all trusting citizens were led to expect from it. Now that the reputation of the police is enlisted in the enforcement of all the laws bearing directly or indirectly upon dirty streets, we have reason to expect a great deal. Time and experience, however, will, we hope, prove that our expectations are not without foundation.

DOCTORS' QUARRELS.

The necessity of having all disputes between medical men settled in some of their local organizations, rather than bring them before the American Medical Association, becomes more and more evident each year. Hardly a session of this National Convention is held without some little unpleasantness, some inexplicable animosity is brought up for adjudication. As faithful recorders of the doings of this body we are compelled to give its proceedings in full, and as a consequence some injury is done to some one. Then come the explanations from both sides, and having been compelled to record the action of the assembly in expelling a member, we are in justice bound to publish the refutations. As often happens, we have no means of judging who is right or who is wrong, and the only parties who are satisfied are those who offer the explanations. Now we protest against this manner of doing things, and take another occasion to suggest the practicability, in fact the necessity, for settling all little disputes at home, and not raising family quarrels to the dignity of national calamities. These remarks seem to us to be warranted at this time by the communication from the President of the Yonkers Medical Asso-

ciation as an answer to one published in a previous issue by Dr. Arnold, bearing upon the case of Dr. De Marmon, of Kingsbridge, N. Y.

Reviews and Notices of Books.

THE IRRITABLE BLADDER, AND ITS CAUSES AND TREATMENT: INCLUDING A PRACTICAL VIEW OF URINARY PATHOLOGY. DEPOSITS, AND CALCULI. By F. J. GANT. Third edition. Philadelphia: Lindsay & Blakiston, 1872.

THE URINE AND ITS DERANGEMENTS, WITH THE APPLICATION OF PHYSIOLOGICAL CHEMISTRY TO THE DIAGNOSIS AND TREATMENT OF CONSTITUTIONAL AS WELL AS LOCAL DISEASES. By GEORGE HARLEY, M.D. Philadelphia: Lindsay & Blakiston, 1872.

IRRITABILITY of the bladder is a symptom of such frequent occurrence, is due to such a large number of causes, and requires such a varied treatment, that a monograph treating fully and clearly of the subject would certainly be a desideratum. On reading the preface to Mr. Gant's book we find that it has already reached a third edition, and from that fact it would seem fair to presume that either the book has very decided merits, or that many persons have desired information on this symptom, and have purchased the book in hopes of being edified by it. We must express our surprise that a single symptom has called forth the production of a book as large as the present, and a careful perusal of it convinces us that there is good reason for it. In his introduction the author treats of the constitutional and social causes of local diseases, and more particularly as causing vesical irritability, and in our judgment it is hard to find a more unsatisfactory performance, as he starts on either false or flimsy premises, and carries out his argument in a pedantic and rambling way. Among the constitutional causes he includes errors of diet, neglect of ablution, and sedentary influences, and in the same strain strings together pages of sentences wholly devoid of reason and pertinence of subject, and in treating of the hysterical condition his remarks are absolutely absurd, and his cases simply ridiculous. Of the local causes which produce irritation of the bladder we find that Mr. Gant is equally as rambling and unmethodical as he is in his consideration of the constitutional causes, and we read with regret, almost disgust, his description of the conditions of the urethra, of the bladder, and of the rectum which can produce this symptom. In fact we think that, after reading these various sections, a person would know even less, than before he began, of the origin of the symptom, so desultory and confusing is the description given by the author. Besides these serious errors and shortcomings in description and method, we find that Mr. Gant has even omitted the enumeration of numerous important and frequent conditions which are attended with this distressing symptom. Thus of the abnormal conditions of the urethra he simply mentions organic and spasmodic stricture, and says nothing of a low grade of inflammation about the bulb which follows clap, and is often attended with this symptom in its most distressing form, and besides this he says nothing of irritation about the veru montanum as being often a cause. His description of the conditions of the prostate is lame and absolutely slipshod, for while he gives a very inaccurate and unsatisfactory account of enlarged prostate, he wholly omits the acute and subacute varieties which so frequently follow on complicated clap, and he does not of course give, as he should, a table of differential diagnosis between acute cystitis and acute prostitis. Furthermore, his directions for the relief of these urethral troubles are equally as unsatisfactory as his description of them, and this is particularly noticeable in the section on the treatment of stricture. There is no mention of vascular tumors of the female urethra as causes of this symptom. The third section of this work treats of urinary pathology, and in it we find long disquisitions upon morbid conditions of the urine and long lists of diseases in which they are found. But of the symptom which is the *pièce de résistance* of the book we find absolutely no definite description, and the treatment is not clearly and precisely laid down. Finally we must confess our conviction that this book can hardly be of any value to the profession, as it is vague and unsystematic, and utterly lacking in the practical features which a monograph on this subject should contain. It is a specimen of the worst form of the modern *Cacoëthes scribendi*, in which an author, imagining he has something to say, says it very badly, and in a frightfully prolix way. It is such books as these which tend to deter medical men from reading, as they convey the impression that it is necessary to wade through so much and in the end to get so little.

Dr. Harley's book is an amplification of a series of eleven lectures, originally prepared for and delivered to a class composed of physicians and advanced students. From this fact it is readily seen that it is a book of practical character and not by any means wholly exhaustive. The lectures having been delivered during a series of years, many points are untouched which otherwise would have been introduced. The first two lectures treat of the physiology of the urine, and are clear and practical. These are followed by chapters devoted to a general consideration of the several ingredients, which are illustrated by cuts, and which are quite well done. The general directions for analysis and for determining the amount of the ingredients are quite full, and the pathological states in which they are found are well described. The chapter upon urinary pigments is worthy of special mention. Dr. Harley's observations upon diabetes and albuminuria are already well known to the profession, and in this book we find his views quite fully given. The chapter on diabetes is especially full and practical. Taken all in all, Dr. Harley's work is a very creditable and trustworthy hand-book of urinary pathology, and is perhaps the best practical hand-book in English upon the urine and its pathology. The present edition is well printed and the illustrations are clearly drawn.

ARCHIVES DE PHYSIOLOGIE NORMALE ET PATHOLOGIQUE. Publiée par MM. BROWN-SÉQUARD, CHARCOT, VULPIAN. No. 2. Mars 1872. Paris: G. Masson.

THE March number of this journal, just received, contains original articles on the following subjects:—I. Researches on the Histology and Physiology of the Nerves, by M. Ranvier. II. On the Nerves of Taste, Observations and new Experiments, by M. Lussana. III. Experimental Researches upon the Agreement in Origin between pus-globules and white corpuscles of the blood in inflammation, by M. Duval. IV. The Gases of the Blood: Physiological Experiments on the Circumstances which cause a Variation in the Proportion in the arterial system, by MM. Mathieu and Urban. V. Note on the Means of Producing the Arrest of Epileptic Attacks and convulsions caused by strychnia and hemorrhage, by M. Brown-Séquard. VI. A Case of Sudden Obliteration of the central artery of the retina, by M. Sichel (fils). VII. Note on the Mucous Tissue of the Umbilical Cord (Whartonian gelly), by M. J. Renault. VIII. The

Anatomical Condition of Muscles, and of the spinal cord in a case of pseudo-hypertrophic paralysis, by M. Charcot. IX. The Sign of the Death-pang, by M. Parrot. X. Researches Relative to the Influence of Traumatic Lesions of Nerves upon the physiological properties and the structure of muscles, by M. Vulpian. Researches upon the Communications of the Retina with the Brain, by Brown-Séquard. Note of a Tumor of the Mitral Valve, by M. Curtis, etc., etc.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 23, 1872.

Dr. A. L. Loomis, President, in the Chair.

The President presented a specimen for a candidate, after which

MORBUS COXARIUS.

Dr. Post exhibited the upper portion of the femur of a little girl three and a half years of age, who when she was about two years old had a fall upon the right hip, and became lame from that time. About eight months since an abscess formed in the neighborhood of the hip, and from that time she had been lying in bed in a very distorted position. Numerous fluctuating swellings were found in the region of the hip, with sinuses leading in different directions. Some of these sinuses were laid open, and afterwards the head of the bone was cut down upon and exposed. This was found to a great extent destroyed, and about an inch in length was sawed off. A number of small fragments were also removed by means of the rongeur, until sound though somewhat softened bone was reached. The operation was performed April 25th. A few days after the operation adhesive straps and a bandage with a weight of three pounds were applied, for the purpose of keeping the parts steady, and of making the requisite extension. The wound has granulated nicely, and the prospects of recovery at the time of reporting the case were good.

AREOLAR VASCULAR TUMOR OF LABIUM.

On the same day of the former operation Dr. Post removed a tumor, large for the size of the patient, from the left labium of a girl aged eleven months. The growth at the time of its extirpation was as large as a hen's egg, and occupied the whole length of the labium. The mother stated that at the time of birth there was noticed a livid, purplish spot, about the size of a small bean, but it was not elevated above the surface. After birth it slowly increased in size, became at the same time prominent, but towards the last it had grown quite rapidly. Dr. Post had no doubt but that originally the tumor was vascular in character, but that it had become hardened by the subsequent incorporation into its substance of more solid material. Apprehensive of some trouble from hemorrhage, he secured the base of the tumor by means of a double ligature. When the mass was laid open it presented very much the appearance of an old internal hemorrhoidal tumor. The edges of the wound were brought together with sutures, but union did not take place by first intention.

THE OPERATION OF CIRSOCELE.

Dr. Post also presented a large part of the scrotum removed ten days previously for cirsocele. The patient was a young man aged twenty-six, who had been aware of the existence of the disease for the past four years. It became the source of a good deal of trouble, affecting, as it almost always does, the left side. The scrotum was embraced between the handles of a long forceps, and as lightly as possible drawn down over the testicle. The portion beyond the blades was then removed by a cutting. The feature of the operation was the employment of the torsion forceps of Dr. Addinell Hewson, of Philadelphia.

POPLITEAL CYST.

Dr. Post also presented a portion of a cyst taken by operation from the popliteal region of a man aged twenty-three, who presented himself the week before at the clinic. On examination, a tumor was discovered in the popliteal region, exactly in that position occupied by popliteal aneurism. It presented distinct fluctuation without any trace of pulsation. No translucency was discovered. The physical characters of the tumor were such as to cause the diagnosis of synovial cysts. The operation for its removal was performed at the patient's house. A longitudinal incision was made over the whole of the tumor, and the integument and fascia covering it divided, when the surface of the cyst was reached. Before the enucleation of the cyst was completed it burst, discharging synovial fluid. Some portion of the cyst wall was left, and wound closed by fine sutures, the parts being dressed with a linen rag moistened with collodion. Although the patient suffered a drawback after the operation, the effects of the anæsthetic, he was at the time of the presentation of the specimen in a fair way to recovery.

MORBUS COXARIUS.

In connection with the specimen of hip-disease, Dr. Sands referred to the result of a case of a boy upon whom he had performed exsection in October, 1870. The case was one in which the whole of the head and a portion of the neck of the bone were removed, as well as a considerable portion of the acetabulum. The specimen was exhibited to the Society five months after the operation, and at the time when the chances of the boy's recovery were still very doubtful. There were very large abscesses at the time of the operation, and these abscesses did not close; the boy looked as though he might be a candidate for waxy disease of some of the internal organs. He remarked that the patient was now well, although the sinuses remained open up to a period of sixteen months after the operation. At the present time the limb was considerably shortened, having been dislocated at the time of the operation in consequence of a carious destruction of the upper part of the acetabulum. There is considerable motion in the joint, and with the aid of a cane the patient can get along very comfortably. Dr. S. also stated that at the time of the operation he was in doubt if all the carious bone had been removed, which suspicion seemed to be amply confirmed by the length of time which the sinuses subsequently remained open. That this was not the case seems to have been proven by the final result. The history was an interesting one as regards prognosis in such cases, proving that sometimes the most desperately appearing cases may sometimes recover.

In answer to a question from Dr. Mason, Dr. Post remarked that as far as he had been able to follow up the operations for cirsocele he had found them attended with great relief. The scrotum after the operation made a more perfect suspensory bag than could be obtained by any other means. The cure could not claim to be a radical one, as there was always some relaxation afterwards, and occasionally it was necessary to repeat the

operation. The trouble was the scrotum was generally not drawn tight enough before the section was made. For one to see the operation performed properly for the first time it would seem impossible to cover the testicle afterwards.

Dr. Newman was afraid of the operation, anticipating the possibility of a subsequent enlargement of the testicle. If this condition were to occur, the pain of the binding scrotum would be intense, and perhaps past remedy. He had been lately in the habit of using galvanism in these cases, and with good results.

Dr. Post had never seen a case in which enlargement of the testicle followed the operation, though such a condition from organic disease of that organ might possibly occur.

ANEURISM AS A CAUSE OF PHTHISIS.

Dr. E. G. Janeway presented a specimen of aneurism with the following history:—

Arthur Anderson, twenty-two years of age, single, was admitted to Bellevue Hospital March 28th, 1872. His history previous to admission was as follows: He had no known hereditary predisposition. He had a sore on the penis seven years before without secondary symptoms, gonorrhœa three years before, and lead colic two years before.

He had been well till three and a half months before admission, when he began to feel dizzy, dimness of vision, and to cough. Three weeks later he noticed sharp and lancinating pains between his shoulders shooting to the front of his chest and into both lungs. Later this pain settled under left shoulder-blade. The cough still continued without expectoration, accompanied by vomiting. At the same time he began to lose flesh and strength. A little later expectoration occurred, frothy and streaked with blood.

When admitted, he complained of lancinating pain in the left side, cough, frothy expectoration, and dyspnœa.

I examined him carefully on taking the service on the 1st of May. He then had retraction of the left side (one inch less than right side), apex bent a little outside of nipple, loss of vocal fremitus over lower half of this side, retained above. Expansion movement lost, elevation movement retained on left side. Dulness on percussion over whole left lung, except the sternal border, where the resonance of the right lung encroached as far as the left margin of the sternum. Bronchial breathing and broncophany over upper half left lung, absence of vocal resonance and of respiratory murmur over lower half. A few moist râles and exaggerated breathing were heard on the right side. The heart-sounds were normal. The temperature taken at one time was 101° F.

The diagnosis was made of fibrous induration and cheesy hepatization in this lung, the heart being pulled to the left by the retraction of the left lung.

May 4th, 1872, it was noted that he had been expectorating blood for several days. The temperature became increased, pulse 120, and was sweating considerably. He continued sinking rapidly till the 9th of May, when in a fit of coughing a sudden gush of blood issued from his mouth, and he sank back dead.

The post-mortem examination was made the next day with the following results:—

The left lung firmly bound to chest wall. The lung-tissue was the seat of fibrous induration and aggregated spots of cheesy hepatization. The bronchi well filled with muco-pus from the main bronchus to the small ones, and this contained no air. The right lung presented a small spot of fibrous induration in the upper lobe. Throughout this lung there were a number of places where the air-cells were filled with blood (drawn in by insufflation).

The heart was normal, but more horizontal and more to the left than usual. The descending arch presented an opening one inch in diameter on its inner wall; this communicated with the sac of an aneurism about the size of a small orange, filled with laminated fibrin. This was partly cut in the removal of the lung, but still shows its position pressing on the left bronchus. This bronchus shows the cartilages laid bare and somewhat separated, and the muscular coat and mucous membrane over a part destroyed. This afforded the communication by which the blood, passing probably between the laminated fibrin and wall of aneurism, entered bronchus. The liver was normal. The right kidney was diminished in size, its cortical tissue was pale, firm, diminished in thickness, the seat of fibrous and waxy changes. The calyces and pyramidal spaces formed cavities filled with putty-like pus. The pelvis and ureter had thickened walls, and contained similar material.

The opening of this ureter into bladder could not be found; though it traced the ureter to the bladder, it was evidently closed by a firm union of the lips. The left kidney was nearly twice as large as usual, and more increased in thickness than in length. It was normal in appearance (simple compensative hypertrophy). The entrance of this ureter into bladder was easily found. The bladder presented no other abnormality than the one above mentioned.

The points of interest about this case are the absence of physical signs of aneurism, the presence of one of the forms of phthisis produced in all probability by it, the physical signs of the disease of the lung partly marked by the pressure of the aneurism on the bronchus.

Dr. Jacobi remarked that the explanation for the pathological changes in the lung could be taken without exception, if it could be allowed that such changes never occurred unless there was an aneurism to cause them. This, however, was not the case. Precisely those conditions of lung might be found as the result of chronic bronchitis and subsequent interstitial deposit.

Dr. Janeway stated that there was no history pointing to the existence of a chronic case.

Dr. Loomis remarked that he had presented to the Society, about three or four months ago, a specimen almost exactly the foregoing, with the exception that there was no shrinking of the thorax to any great extent. That case had a distinct history of acute pneumonia, chill, fever, and rise in temperature. He went through the history of acute pneumonia, and the physical signs did not change. Finally one day the patient ruptured his aneurism and died. At the autopsy the bronchial tubes were filled with pus, showing that there had been some obstruction to the outward passage of secretion through the bronchial tubes. If the patient's life had been spared a little longer the lung would have been ready for fibrinous induration.

Dr. Mason asked if it was not unusual for aneurismal sacs with laminated layers to burst.

Dr. Janeway had seen several, a recent one had been presented by Dr. Flint.

SYPHILIS AS A CAUSE OF CARDIAC DISEASE.

Dr. Janeway next presented a specimen illustrating, as he claimed, the influence of syphilis in producing heart-disease. It was taken from a man forty-four years of age. He had been sick only four and a-half months, had never had rheumatism, and in fact had no other disease save syphilis. He had a loud aortic regurgitant murmur, forcible pulsation in the arteries, dyspnœa, œdema of legs, and some œdema of the lungs.

On the 11th of May, while sitting up in bed, he gave a scream and died suddenly, as patients often do with aortic regurgitant murmur. There was also a mitral systolic murmur, which being heard only at the apex was not regurgitant.

At the autopsy numerous hemorrhagic infarctions existed in both lungs. These organs were also œdematous and pigmentary. The liver was cirrhosed, and the kidneys were beginning to undergo decomposition. The right ventricle was dilated, the left ventricle hypertrophied. The aortic valves were shortened, thickened, and covered with vegetations. The mitral valves were perfectly healthy, and did not leak a single drop. The right side of the heart was a little dilated. There was no obstruction of the coronary artery. He regarded the cardiac disease, in the absence of any of the accepted causes, to be due to syphilis.

DEATH FROM SYNCOPE.

He presented a third specimen removed from a female patient of Bellevue Hospital, aged twenty-four. She stated that four years before she had an attack of dysentery, which finally became chronic, and then lapsed into a stubborn diarrhœa. The latter existed until death. She was very anæmic, and had a pronounced anæmic murmur at the base of the heart. One day she went to the water-closet, and while sitting on the seat she fell over in a slight convulsive movement and died.

At the autopsy all the organs were healthy except the large intestine, which showed the usual lesions. The only theory upon which sudden death could be explained was a sudden effort producing a fatal syncope.

Dr. Mason exhibited some fibrous tumors of the lobes of the ear removed by operation from a mulatto girl. The appearance of these growths, three in number, each the size of a hickory nut, two on right ear and one on the left, had a growth of four years, and resulted from the wearing of earrings.

THROMBOSIS OF OVARIAN VEINS.

Dr. Mary C. Putnam presented a portion of the ovarian ligament removed from a woman dying shortly after confinement, as the result of adherent rheumatic pericarditis. In assisting at the autopsy there was noticed a peculiarity in the ovarian vein and in the interovarian plexus in the right broad ligament. There was a dilatation and thrombosis of two veins, which was of interest as representing one of the numerous conditions of hematocele. There was nothing to explain this dilatation; the patient had never had varicose veins, never any external thrombus of the vulva, and never any disease of the heart previous to the acute attack of pericarditis. The morbid appearances were confined entirely to these two swellings which evidently would have been quite sufficient to occasion a severe hemorrhage, if anything had occurred to bring about a rupture.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 6, 1872.

Dr. E. R. Peaslee, President, in the Chair.

Dr. Edward John Tilt, of London, was elected a Corresponding Fellow.

The President announced the receipt of Daily Bulletin and Weather Maps for May 29th, 1872, from Gen. Meyer, Chief Signal Office, U. S. A.; also an obituary notice of the late Chas. A. Lee, M.D., from Dr. J. M. Toner, as contributions to the library.

A case of bronchitis, with impending suffocation, was reported by Dr. A. C. Post, which was relieved in a few minutes by the application to the chest of twelve large tumblers as dry cups.

In answer to the query of Dr. Roberts, whether it was not a proper case of bleeding, Dr. Post stated that twenty-five years ago he probably would have bled the patient, but at present he did not as often resort to venesection as formly.

The President remarked that in such cases the great object was to draw blood from the lungs for a time.

SYPHILIS TREATED BY SYPHILIZATION.

Dr. J. C. Hutchison, of Brooklyn, then read the subjoined three cases of "syphilis treated by syphilization":—

When Prof. Boeck, of Norway, visited this country in 1869, I had under my charge at the Brooklyn City Hospital several stubborn cases of tertiary syphilis, which he kindly consented to take care of and treat by syphilization. I was impressed not only by his active zeal and earnestness, but also with the honesty of his motives and the sincerity and simplicity of his character, and did not hesitate therefore to place my patients entirely at his disposal. The cases are made public both in obedience to his request and on account of the intrinsic importance of the subject.

The progress of the treatment was carefully observed by myself as well as by many other gentlemen who were interested in the question. The disease had resisted all the usual remedies, and as the patients steadily grew worse, they promptly consented to have syphilization practised. Their co-operation was thorough and complete, and they soon manifested the greatest interest in having the inoculations regularly performed.

Not having seen the practical effects of syphilization, I was unwilling to have any patient syphilized who had a prospect of being relieved by the ordinary methods of treatment. The cases here recorded subjected the treatment by syphilization to the severest test, and having been repeatedly mercurialized, they were among the class of cases which Prof. Boeck regards as the least amenable to this plan of treatment. Nevertheless, he was anxious to submit syphilization to the most rigid ordeal.

Case I.—John S——, æt. 28, native of Ireland, by occupation a coachman, entered the Brooklyn City Hospital, Sept. 23, 1869. His general health had been good before he contracted syphilis. His habits of life have been very irregular, and had been addicted to the use of alcoholic liquors. His experience in venereal disease had been large and various; stated that he had a sore upon his penis at the age of sixteen, that he had had several others since that time, also two or three attacks of gonorrhœa. About three years ago he had a sore on penis which was soon followed by alopecia. Took no medicine at this time. At the end of a year or fourteen months, having contracted no other sore meanwhile, he had a scaly eruption on his face; this remained about two months, and then seemed to yield to local applications. About five months since a circle of small sores appeared upon the glans penis, shortly after an exposure; these were slow in healing, persisting over four months. Three months ago began to have sore throat, which has constantly increased in severity until the present time. Stated that he had taken no medicine before entering hospital, except a few, about six "blue pills."

Examination on admission showed the uvula, ton-

sils, and soft palate to have been almost wholly destroyed by the ulcerative process; ulceration extended into the pharynx; larynx was probably involved, since there was almost complete aphonia. The ulcerations in fauces and pharynx had an ashen-colored base, and discharged a thick muco-purulent matter. Swallowing was difficult, as well from the tenderness of the parts concerned as from regurgitation through the nares. Small patches of eczema were observed on scalp, face, and neck. The inguinal, post-cervical, and epitrochlear glands were enlarged and indurated. There were numerous cicatrices on penis and in groin. Emaciation had been rapid. Had no appetite. Was confined to the bed.

Nov. 1st.—Treatment by means of mercurials and iodide of potassium had been perseveringly tried without benefit; had had cod-liver oil, ferruginous tonics, and a supporting regimen in such quantities as he had been able to appropriate. Ulceration progressed, and it was impossible to open mouth wide enough to obtain a satisfactory view of the parts. The following prescription was employed during the last two or three weeks.

℞. Hydrarg. chlor. coros.....gr. j.
Potassii iodidi.....℥j.
Sol. ferri pyrophos.....f℥ss.
Emuls. ol. morrhuæ.....f℥vss.
M. Sig. One tablespoonful thrice daily.

Nov. 3d.—With the consent of the patient, pus from a chancroid was introduced in symmetrical positions on the chest by three inoculations on each side; all other treatment was suspended, except local applications.

Nov. 6th.—The inoculation was only partially successful; decided pustulation not produced. Inoculated with matter from a typical inoculation on another patient.

Nov. 26th.—Re-inoculation had been practised on every third day when a pustule resulted, when it did not, matter was obtained from other sources and daily introduced as before. Patient said he felt better. The following was ordered:—

℞. Spts. ætheris comp.....fv℥j.
Tinct. gentian comp.....f℥v.
M. Sig. One teaspoonful thrice daily.

Dec. 4th.—Inoculations frequently fail to take effect, and never produce a large pustule. Received this day fresh virus from Charity Hospital, New York; as the chest appeared to be no longer susceptible, introduced the virus into the arms. It is customary with Dr. Boeck, when the inoculations habitually fail, to give small doses of the iodide of potassium for two weeks, and then recommence inoculations; the system is supposed thus to become more susceptible to the virus. Accordingly the following was ordered:—

℞. Potassii iodidi.....ʒij.
Aquæ.....f℥iv.
M. Sig. One tablespoonful thrice daily.

Topical applications to fauces of strong solutions of the nitrate of silver and chromic acid were made. No marked change was observable.

Dec. 18th.—Recent inoculations had been more successful. The condition of patient had improved; had better appetite and more strength. Throat had improved, but aphonia continued.

Dec. 26th.—Medicine had been discontinued. Daily inoculations had been made upon chest or arms. They sometimes took effect, but not very vigorously; occasionally they wholly failed. Condition was unchanged.

January 8, 1870.—Inoculated thighs with matter from Charity Hospital. Inoculations were continued on the chest and arms, but they seldom succeeded.

Jan. 12th.—Debility and pain having increased, the iodide of potassium was prescribed again. Daily inoculations were continued; those on the thighs were more effective than those in other situations. The ulcerative process in the throat had made no progress since the present treatment was instituted; aphonia continued; eczema had nearly disappeared; general condition had somewhat improved.

Feb. 1st.—Inoculations were still practised upon the arms and thighs. They did uniformly succeed. Extreme emaciation and debility continued. Had irritative fever, and a troublesome laryngeal cough. Opiates were required at night.

Feb. 20th.—Patient was no longer susceptible to any virus that could be obtained. The iodide of potassium, to which the tincture of gentian had been added by Dr. Boeck's advice, was again administered.

Feb. 25th.—For the first time in six weeks was strong enough to get out of bed and go about the ward; aspect had greatly improved; had gained rapidly in flesh and strength; did not sweat at night, and cough was much less troublesome. The throat had entirely healed.

March 12th.—Several inoculations had been tried, but without effect. The potassium was discontinued on the 7th inst.

March 20th.—Right thigh and knee were painful and swollen; relieved by local applications. Ulceration in mouth and nares had again set in.

May 26th.—He was unable to leave his bed on account of the pain in knee. There was no improvement in his general condition.

August 3d.—He died from exhaustion.

Summary.—This case entered the hospital in a deplorable condition. He was rigidly subjected to the most orthodox treatment, medicinal and hygienic, without the slightest improvement—indeed, he steadily grew worse until syphilization was begun. The ulcerations in the throat, which were progressing when this treatment was instituted, did not increase subsequently. A large proportion of the inoculations failed. Dr. Boeck says that in those patients who have for a long time been treated by mercury, it is very difficult to obtain effective inoculations, and it is not rare that after a short time the result is negative. At the end of three and a half months the inoculations with virus, from whatever source obtained, ceased to produce the slightest effect. Five days subsequently it is recorded that "for the first time in six weeks, has been strong enough to get out of bed and to go about the ward; aspect greatly improved; gains rapidly in flesh and strength; sleeps and eats well; does not sweat at night; cough much less troublesome; throat has entirely healed." This result confirms the statement of Prof. Boeck, that as a rule the syphilitic symptoms disappear when the virus ceases to produce appreciable effects. Before the end of another month the grave symptoms returned, prostration increased, ulceration in the throat and nares again set in, producing difficulty in swallowing and regurgitation of fluids through the nares, and he died from exhaustion August 3d.

The good effects of syphilization in this case were for a time very marked, and, I must confess, were surprising to me; and I do not think that Prof. Boeck himself expected so great an amelioration of the symptoms as took place. It seems to me to be a legitimate conclusion that this patient's life was at least prolonged by this method of treatment.

Case 2.—James C——, æt. 21; sailor; admitted August 16, 1869. Patient stated that his health had been good. Five months previously, ten days after an exposure, a small sore appeared near the meatus urinarius, followed soon after by other sores upon the glans. These healed rapidly, to be followed by another

in April, without fresh exposure; this also healed speedily. Early in May he began to have sore throat, and cervical glands became enlarged.

June 8th.—An eruption made its appearance on the forehead, and since that time it has spread to the face, trunk, and limbs.

Examination, on admission, discovered patches of ulceration in fauces and pharynx; the epitrochlear and inguinal glands were enlarged and indurated. A very extensive rupial eruption was noticed in various parts of the body; was emaciated and very feeble. Treatment by means of mercurials (internally and by fumigation), iodide of potassium, sarsaparilla, etc., was instituted.

Sept. 2d.—No improvement having taken place under the usual treatment, syphilization was, with the consent of the patient, inaugurated.

Nov. 30th.—Inoculations with matter from a soft chancre, on chest, were systematically practised every third day, and were invariably successful.

Dec. 14th.—No further effect was produced by inoculation on chest, by matter from whatever source. Large crusts formed on the sites of inoculations; they increased in size and became confluent. Rupial crusts on face diminished in size. General condition was somewhat improved.

Feb. 1st.—Reinoculations had been practised successfully on arms and thighs, which were covered with extensive crusts, while the chest was comparatively free from them. Large ulcers continued in the throat, and there was a constant fetid discharge from the nose. Although the patient appeared to be in better physical condition, he was yet too feeble to leave his bed.

Feb. 21st.—Inoculations were seldom effectual; they were accordingly discontinued, and the iodide of potassium, with a vegetable bitter, was prescribed.

March 8th.—Recommenced inoculations, but the patient was no longer susceptible to virus taken from any source.

March 28th.—The general physical condition was improved; the patient left his bed for the first time in five months; ate and slept well. The ulcerations in throat and pharynx had healed.

May 3d.—The crusts following inoculations had nearly all disappeared. The patient weighed one hundred and eighty pounds—more than at any previous period. Said he was a "well man."

July 9, 1870.—Had continued to improve in health and strength, and was discharged cured.

Summary.—This patient was not so feeble as the first, although he was sufficiently so to keep his bed for five months after he entered the hospital. He was subjected to mercurial treatment for two months before he came into the hospital, and for two weeks afterwards, without benefit. Between five and six months after the inoculations were commenced there was a decided improvement in his symptoms. The inoculations were quite effective. At the end of six months he became insusceptible, and coincidently with this all his symptoms improved. Nine months after syphilization was instituted he was discharged cured.

Case III.—John Sullivan, æt. 37, a sailor, was admitted to the Brooklyn City Hospital, August 1, 1869. He had several venereal sores, one of which, contracted about two years before, was probably a hard chancre. His eyebrows fell out, but not the hair. There was no eruption or persistent sore throat. In Sept. 1867, he entered the hospital at Savannah, to be treated for severe nocturnal pains in the shin-bones; and while there had an attack of malarial fever. Was then treated by means of quinia, arsenic, and mercurials. The pains continued until the date of admission, at which time he complained of severe pain in his joints, of a somewhat fugitive character, and in his shin-bones, aggravated at night; had severe frontal headache. There were nodes on both tibiæ, which were tender to the touch. Many superficial lymphatic glands were enlarged and indurated. He was emaciated, feeble, and anæmic.

Nov. 8th.—The usual treatment—mercurials, iodide of potassium, iron, bark, cod-liver oil, etc.—was tried without benefit, and abandoned. Syphilization was then substituted by Prof. Boeck. Matter was taken from a well-marked pustule on a patient inoculated with virus from a soft chancre. Had been confined to his bed during the previous week.

Nov. 20th.—Reinoculations were made every third day; distinct pustulation resulted from four out of every six trials, but the pustules were not large. The pus used at this date was taken direct from a fresh chancroid.

Dec. 2d.—The inoculations were not very effective; accordingly the following was prescribed by Dr. Boeck:

℞. Potassii iodidi.....ʒ j.
Spts. ætheris comp.....f ʒ iss.
Tinct. gentian comp.....f ʒ iss.
Aquæ, q. s. ad.....f ʒ vj.
M. Sig. One tablespoonful thrice daily.

Dec. 11th.—Had been reinoculated on chest every day since last entry. Inoculation was commenced on the arms. The pustules were more complete than formerly. The nocturnal, frontal, and other osteoscopic pains were not felt every night, and when present were less severe than formerly.

Dec. 21st.—Had been inoculated from pustules on his own body since Nov. 23; on an average seven out of twelve trials had been successful. The potassium was discontinued. The patient had perceptibly improved, and was able to get up and walk about the ward, and on pleasant days he went out of doors.

Dec. 27th.—The thighs were inoculated for the first time.

Jan. 25th.—Inoculations did not take well, and the iodide of potassium was again ordered. Had a recurrence of nocturnal pains, but they were not so marked as before.

Feb. 11th, 1870. Dr. Boeck remarked: "The benefit from the treatment in this case, I believe, is very satisfactory; the pains in the bones are gone, the hyperæsthesia of the skin is removed, the tibiæ are no longer sensitive, his health is improved; his appetite is excellent and he has gained flesh."

April, 1st.—Discharged cured.

Nov. 3d.—Readmitted to hospital on account of diarrhœa. Complained of none of the symptoms of syphilis.

Summary.—This patient had been treated for more than two years with mercurials, for three months in the Brooklyn City Hospital, without material benefit. The inoculations took poorly. Some improvement in his symptoms was noticed at the end of a month, and in four and a half months the inoculations ceased to be effective. He was discharged free from all syphilitic symptoms. Seven months subsequently he was readmitted to the hospital on account of diarrhœa, and presented no traces of syphilis.

The three cases here reported went from bad to worse under the various treatments which had been adopted, and were regarded as utterly hopeless when Prof. Boeck began the inoculations. Dr. M. H. Henry, Editor of the *American Journal of Syphilography and Dermatology*, who visited the patients with Prof. Boeck, declared that they were the most unpromising cases he ever beheld. The experience afforded by three cases of tertiary syphilis treated by inoculation is insufficient to justify us in determining the value of

syphilization as a remedy for syphilis; a much longer experience would be necessary for this purpose. It is sufficient, however, to induce me to question the justness of the inexorable rule laid down by Messrs. Lane and Gascoyne, of the London Lock Hospital, and indorsed by one of our highest American authorities, Prof. Bumstead, who observed the effects of syphilization in three cases at the New York Hospital (*Am. Jour. Med. Sciences*), "that syphilization is not a treatment which can be recommended for adoption." In such chronic cases as are here reported, which fail to yield to more ordinary treatment, syphilization is surely a treatment which *can* be recommended, and I feel that I would have been justly censurable had I omitted to avail myself of the advice of so experienced and conscientious an observer as Prof. Boeck has proven himself to be both here and abroad.

It cannot be expected from the limited experience herein detailed that I shall endorse all the positions of the advocates of syphilization, but I feel that I shall be warranted in proffering this plan of treatment, novel and unpopular though it be, to such patients as shall persistently defy, and grow worse under the plans that are now authorized and accepted; and that such cases do occur, I presume no student of syphilis will deny.

Dr. A. C. Post believed the theory of syphilization, or the introduction of the syphilitic poison into the patient until he is no longer susceptible to it, a false one. If the theory be correct, the chancroidal inoculation would be the proper one. It was supposed by some, that the establishment of a large number of pustules in different parts of the body tended to facilitate the elimination of the poison from the body and to cure the disease.

Dr. Isaac E. Taylor stated that syphilization had been tried in Charity Hospital before Dr. Boeck came to this country, and after his arrival syphilization was tried on from eighty to ninety cases, but without success; some of the cases were afterwards cured with mercurials.

At Bellevue Hospital syphilizatton was adopted in the case of a woman, but unsuccessfully; mercurials were used subsequently with success. No good result had followed syphilization in Charity Hospital at the time Dr. Boeck left this country, and he confesses that he was not favorably impressed with this plan of treatment, consequently he had not resorted to it.

Dr. E. L. Keyes remarked that as relief did occur in the cases so ably reported by Dr. Hutchison, after all other methods of treatment had failed, the use of such treatment in similar cases was warranted. In most cases, the early eruption of syphilis got well under almost any treatment, while others go on getting worse.

He mentioned a case where the bones of the nose had become affected, the shins were swollen and painful, and purpura developed by 7½-grain doses of iodide of potassium. A change to the country, cod-liver oil and small doses of iodide of potassium produced a great change for the better in a few weeks. These cases improve much more rapidly in the country than in hospitals. He believed that the first infecting chancre protected nearly all. A case was related where secondary symptoms followed a soft chancre. Infecting and non-infecting, would be better terms. It is better not to commence constitutional treatment in every case, but, when in doubt, wait a few months for an eruption.

Dr. W. C. Roberts thought that soft as well as hard chancre infect; had seen secondary symptoms follow soft chancre.

Dr. Taylor said that Dr. Boeck did not expect to succeed in those cases that had been treated with mercury.

The Academy then adjourned.

Correspondence.

PESSEMA, A NEW FORM OF SKIN-DISEASE.

To the Editor of the Medical Record.

Sir:—An article, translated from the German, with the above caption, appeared in the *Physician and Pharmaceutist*, vol. iv., No. 3.

An article from Dr. Julius Levy appears (from the German) in the Record, December 15, 1871, on bromide of potash producing boils; and in vol. vi., No. 24, of the Record I have an article on the same subject.

I have now to report a case which I have had under observation for the past eight or ten weeks, which very much resembled the case of "Pessema." Miss E. D., æt. 30, came to my office some time in December, 1871, when I prescribed soda and bismuth for a chronic gastritis. She has been ailing more or less since a child. Was always weakly and feeble. She has at present some female trouble, but what I cannot learn, further than that there is a profuse leucorrhœa. I could not obtain an examination.

December 29, 1871.—I prescribed elixir cal., iron, and bismuth for debility, chlorate potash and sulphur zinc for leucorrhœa. This treatment was continued until February 6, 1872, when, to allay restlessness and nervous excitement, I added bromide of potash, of which fifteen grains in solution were directed to be taken two or three times daily. When I next saw my patient (February 19th) I found her covered with sores, to use a common expression, from head to foot. This eruption had been about two days in developing after its first appearance. So much did this resemble variola in its general appearance, that I involuntarily began to question in my own mind whether I had not in reality a case of the kind. Bergh says that his case resembled variola very much. The pulse was normal, appetite good, digestion painless, bowels regular, or nearly so, no headache, but very nervous and restless nights.

The whole face was somewhat swollen, as were also the limbs below the knees. The pustules were discrete. There were about twenty on the face, and a few on the scalp. The arms and legs were thickly covered. I counted forty large pustules on one leg between the knee and ankle. The thighs and body were but little affected, the most being on the back. These pustules were elevated from two to five lines above the surface of the skin, and were from three to six lines across the base. They were round, and displaceable with the skin, with a well defined outline, regularly convex, and somewhat roughened on the surface of the mature pustule, but smooth on those just forming. They were of a brownish-yellow color, hard to the touch. Those pustules on the fore-arms and legs had a red areola. At one time the legs were so inflamed (about the base of the tumors) as to be quite painful when the patient was standing on her feet.

By firm pressure a small amount of pus could be made to ooze out from several small openings, but without reducing the size of the tumor. Its texture was spongy, and bled freely if pricked or irritated too much. The

mucous membranes were free from pustules, and there was no enlargement of the lymphatic glands.

Until or up to the 20th of March there was no perceptible change in the condition of the patient, except on the face, where the tumors look smaller. They are apparently being absorbed. At this time I prescribed:—

℞. Quiniæ sulphatis ..... ʒ ss.
Acidi phosphorici diluti ..... ʒ v.
" nitro-muriatici ..... gtt. xx.
Tincturæ lavandulæ compositæ ..... ℥ ss.
Syrupi simplicis, ad ..... ʒ iv.
Misce. Signa: Dosis cochlea minima ter die.

On March 27th there was a perceptible change in the looks of the face and arms. There was thin cuticular desquamation, the most of the tumor being removed by absorption. The limbs were looking about the same as formerly, but the inflammation had all subsided.

April 15th.—Patient is now quite well, so far as the skin difficulty is concerned, but the effects of the disease are still apparent. The face and limbs show numerous scars, those on the limbs appearing much like an old boil, being blue in color. The duration of the disease in this patient, from its inception to its absorption and desquamation, was about eight weeks.

Bergh refers to a case reported by Beigel, which he (Beigel) calls "papilloma areo-elevatum," and says:—

"There is an unmistakable identity between both cases in the spongy nature of the texture which caused the elevations. Under the microscope the extirpated masses present all the appearance of granulating texture, consisting of small round granular cells, with one or two granular vesicles, resembling blood or pus cells. These cells were packed closely together in a shapeless, interstitial substance, the latter yielding mucein on reaction. The numerous capillaries—a distinct network of which could be demonstrated—still increased the resemblance to an ordinary granulating surface. As the sections were made on the level of the skin, none of the papillæ of the skin were included, and nothing but a granular mass was seen under the microscope. In Beigel's case the granulations were less marked, and this induced Beigel to assume that the mass essentially consisted of the enormously enlarged papillæ."

Bergh does not doubt the enlargement of the papillæ both in his and Beigel's case, but not to that extent which Geibel shows in his drawings.

In regard to the symptomatology, a remarkable anæsthesia of the skin was observed in a case reported by Geibel, and also the pemphigoid vesicles were wanting. It appeared in a feeble, badly nourished child, that for six weeks prior to the eruption had suffered from convulsions. In both cases (Beigel's and Geibel's), as well as in the one which I have now reported, syphilis must be excluded.

In regard to the nomenclature of the disease, Bergh objects to the name of papilloma areo-elevatum, as the enlargement of the papillæ is observed in so many diseases of the skin, and it is therefore improper thus to define the term.

C. W. Frisbie, M.D.

Fort Plain, Montgomery Co., N.Y.

CAN FIGURES LIE?

To the Editor of the Medical Record.

Sir:—A recently printed article, bearing an advertisement of the "Homœopathic Mutual Life Insurance Co.," has been more or less circulated in New York during the past spring. It endeavors to show how much more successful the Homœopathic physicians are than those of the Allopathic school, by a reference to the register of deaths kept by the Metropolitan Board of Health of New York City, during the years 1870 and 1871.

As this register includes the name of the attending physician in each case, the author of the article took the trouble to investigate the numbers of deaths recorded, as occurring during those years in the general private practice of Allopathic and Homœopathic physicians in acknowledged good standing. He discovered that the number of deaths was 32,925,—of which 30,395 occurred under the care of 984 Allopathic physicians, and 2,530 occurred under the care of 156 Homœopathic physicians. The average being 30.89 deaths to each Allopath, and 16.22 to each Homœopath practising in New York City during the past two years.

To a superficial or prejudiced reader these figures may seem very convincing. But to show the imperfection and unfairness of the statement, it is only necessary to call attention to the fact that the author makes no mention of the proportion between the number of cases TREATED, and the number of cases TERMINATING FATALLY. For example: If each school lost one-tenth of the cases under their care, the Allopaths, to have lost 30,395, must have had 303,950, and the Homœopaths, to have lost 2,530, must have had 25,300 cases. If the 984 Allopathic physicians had 303,950 cases and lost 30,395, they must have benefitted 272,555—an average of 275.97 to each physician. If the 156 Homœopathic physicians had 25,300 cases and lost 2,530, they must have benefited 22,770—an average of 145.32 to each physician. Thus the tables are turned, showing a difference of 127.34 in favor of each Allopathic physician.

Of course this result is merely hypothetical. But it shows how figures can be made to lie, by only showing a portion of the truth.

The author ends his article by saying: "These statistics, and the logical inferences therefrom, we leave to the consideration of the thoughtful public." The present paper may conclude with the same statement.

Allan C. Hutton, M.D.

47 East 9th St., New York.

THE YONKERS MEDICAL ASSOCIATION.

To the Editor of the Medical Record.

Sir:—It is with extreme reluctance that I for the first time appear in print as a controversialist, but I feel compelled to make some reply to Dr. Arnold's uncalled for and unjustifiable aspersions of the Yonkers Medical Association, of which I have the honor to be president, which appeared in your previous issue.

And first let me say that the Association did not authorize and do not indorse the resolutions offered at Philadelphia by Dr. Parson with regard to Dr. De Marmon; in fact we knew nothing about them till we read them in the printed report of the Transactions of the American Medical Association.

Dr. Arnold therefore goes out of his way to make a gratuitous attack upon our Society, in a communication which contains as much practical untruth, and as much insult, both to the Society and to individuals, as it conveniently could.

He characterizes it as a family concern, I presume, because my father, myself, and my brother all belong to it. This is a sneer so ungentlemanly and so unmanly as to be quite unworthy of notice. He goes on to say that he thought it a waste of his time to attend it, and with an effrontery peculiar to himself assigns the same

feeling and motive to others. The character of the gentlemen who compose the Association, and of its recorded proceedings, show this statement to be so supremely silly and conceited that I hope Dr. Arnold speaks for himself alone, and I know he does so far as some of those he would by implication associate with him are concerned. Dr. Ludlow resigned because his advanced age (78) rendered it impossible for him to attend evening meetings, as he has himself frequently stated. Dr. Upham, who has expressed himself as annoyed and offended at Dr. Arnold's unauthorized use of his name, resigned before the resolution referred to was passed, and, as we have reason to believe, for causes which referred to Dr. Arnold himself rather than to the Society. In referring to Dr. Reinfelder as a recent graduate an implied misrepresentation is made. Dr. Reinfelder supplemented his German credentials, it is true, by obtaining a diploma from an American College, and Dr. Arnold himself did the very same thing, so that any such reference to it comes with a specially bad grace from him. In conclusion, it is a matter of astonishment that any one, without cause or provocation, should have written such a tissue of mean, underhand, insulting falsehoods. I never should think it worth notice personally, but for the sake of those who can only know one side, if they only hear one, I feel that this attack upon a most excellent society, and upon honorable medical men, ought not to go unanswered.

J. H. Pooley, Jr.

Yonkers, June 27, 1872.

SMALL-POX STATISTICS.

To the Editor of the Medical Record.

Sir:—The hope expressed in my recent paper under the above caption—that it might have the effect of attracting the attention of abler statisticians than myself to the subject—finds its fulfilment in the communication of Dr. Charles P. Russel, published in your last issue.

With the Doctor's suggestion, that I should examine and compare the ages, as well as the nativities, of patients in the computation of the relative death-rates, I very gladly comply, and shall hope ere long to lay the results of my investigations before your readers.

In the mean time I must disclaim the commission of myself to the hypothesis of relatively greater constitutional vigor in the foreign-born than in the native population, which Dr. Russel ascribes to me. I recorded the results of my examination of the hospital statistics as curious rather than conclusive, and expressly spoke of the impropriety of basing absolute inferences upon the figures of a single hospital.

I must also take exception to the manner in which Dr. Russel attempts to explain away the indications of the hospital records. Because, according to Dr. Russel's calculations, a larger aggregate number of foreigners than natives, over ten years of age, died of small-pox during the year, he argues that there is no significance in the statistics which show for the natives a *relatively* greater death-rate. Dr. Russel should take into consideration the fact that a much larger number of foreign-born than native residents of the city contracted the disease. It would be as fair to say that because the total number of deaths among the whites was greater than among the colored, therefore the disease is more fatal to whites, whereas it is decidedly the reverse. Comparisons, to be of any value, must take into consideration the number of cases as well as the number of deaths; and I think that if Dr. Russel will ascertain the *percentage* of deaths to patients in each class, he will find his results very similar to my own.

Yours respectfully,

A. E. Macdonald, M.D.

Charity Hospital, New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 19, 1872, to July 3, 1872, inclusive.

Randolph, Jno. F., Surgeon.—By S. O. 148, War Department, A. G. O., June 27, '72, relieved from duty in the Department of the Gulf, to proceed to Washington, D. C., and settle his accounts as Acting Medical Purveyor.

Clements, B. A., Surgeon.—By S. O. 143, War Department, A. G. O., June 21, 1872, relieved from duty in Department of the Gulf, and assigned to duty at St. Louis Department, Mo.

Spencer, Wm. C., Surgeon.—By S. O. 57, Mil. Div. of the Mo., Chicago, Ill., July 1, 1872, assigned to duty as attending surgeon and examiner of recruits in this city, to date from 25th ult.

Bache, Dallas, Surgeon.—By S. O., Department of the East, July 1, 1872, granted thirty days leave of absence, and at its expiration to report to the commanding officer Fort McHentry, Md., for duty as Post Surgeon.

Storrow, Samuel B., Assistant Surgeon.—By S. O. 55, Department of the Lakes, June 19, 1872, assigned to duty at Fort Ontario, N. Y.

Tilton, H. R., Assistant Surgeon.—By S. O. 124, Department of the East, July 2, 1872, to accompany 8th Inf. to Sioux City, Iowa, return to New York City upon completion of said duty, and report in person at these Headquarters for further orders.

Jaquett, Geo. P., Assistant Surgeon.—By par. 1, S. O. 109, Department of the Platt, June 28, 1872, assigned to duty as Post Surgeon at Fort Sanders, Wy. T., and by par. 4, same order, granted leave of absence for thirty days.

Brown, H. E., Assistant Surgeon.—By S. O. 139, War Department, A. G. O., June 17, 1872, detailed to make the inspections and reports, required under Joint Resolution of Congress "Providing for a more effective system of quarantine on the southern and gulf coasts;" to return to Washington, D. C., on Nov. 1, 1872, and through the Surgeon-General make his report to the Secretary of War.—Station: New Orleans, La.

Buchannan, W. F., Assistant Surgeon.—By S. O. 111, Department of Texas, June 24, 1872, assigned to duty at Fort Concho, Texas.

Monroe, F. Le B., Assistant Surgeon.—By S. O. 148, C. S., War Department, A. G. O., granted leave of absence for ninety days.

Medical Items and News.

At the recent commencement of Franklin College Ohio, the honorary degree of LL.D. was conferred on Prof. Samuel G. Armor, of the Long Island College Hospital, Brooklyn, N. Y.

The Annual Meeting of the British Medical Association for 1872 will be held at Birmingham on the 6th, 7th, 8th, and 9th days of August next. The committee on the Annual Museum invite contributions of the following articles:—

1. New or improved surgical instruments or apparatus.
2. New drugs or pharmaceutical preparations.
3. New articles of diet for invalids.
4. New medical works.
5. Pathological specimens, wet or dry; and casts, photographs, drawings or diagrams, illustrative of pathological conditions.
6. Preparations, etc., illustrative of diseases of the organs of circulation; and instruments employed in their detection and treatment. It is the intention of the committee to arrange these in a separate department of the Museum.

Printed catalogues will be issued.

Mortality Statistics of the Three Learned Professions.—Dr. J. M. Toner, Washington, D. C. (*Boston Med. and Surg. Journal*), has compiled the following statements of the number of deaths returned from the Census of 1870, as occurring among the three learned professions of our country—theology, medicine, and law—for the year ending June 30, 1870. He has been unable to obtain the number returned as engaged in each of these professions for the year 1870. For the year 1850 there were returned 28,842 clergymen, 40,564 physicians, and 23,939 lawyers. For the year 1860 there were returned 37,529 clergymen, 54,543 physicians, and 33,193 lawyers. It is fair to presume that each retains about the same proportion to each other in the census of 1870. The number of deaths reported among clergymen in all the States and Territories of the United States for 1870 was 629; among physicians, 947; and among lawyers, 595.

Causes of death assigned.	C.	P.	L.
Unknown,	10	15	1
General Diseases,	242	344	234
Diseases of the Nervous System,	77	143	234
" " Circulatory System,	54	73	54
" " Respiratory System,	84	130	58
" " Digestive System,	76	105	61
" " Urinary and Generative Organs,	32	37	19
" " Organs of Locomotion,	3	4	
" " Integumentary System,	1	1	3
Condition not necessarily associated with general or local diseases,	39	31	19
Poison,	2	18	13
Accidents and injuries,	9	46	43

Affections of the Eye.—At a late session of the St. Louis Medical Society, Dr. H. Z. Gill, of St. Louis, Mo., read an important paper "On Affections of the Eye from neuralgia of the fifth pair of nerves, caused by diseases of the dental organs, presenting specimens.

St. Thomas' Hospital, London.—This new imposing structure, situated on the right bank of the Thames, covers nearly an area of twelve acres of ground. The whole cost of the buildings, with furniture, amounted to about $2,500,000.

Five Temporary Teeth at Forty.—The *Canada Journal of Dental Science* reports the case of a lady who had five teeth removed at the age of forty, which, on examination, proved to be the temporary teeth, the permanent ones coming on after them.

Human Skin for Binding.—A copy of the "Constitution of the French Republic of 1794," bound in human skin, has been sold in Paris.

Brown University.—The late William S. Rogers, of Boston, bequeathed $50,000 to found a Professorship of Chemistry in Brown University, to be known as "The Newport Rogers Professorship."

Buffalo General Hospital, N. Y.—The will of the late S. F. Pratt, of Buffalo, contains a bequest of $10,000 to this hospital, payable Jan. 1, 1880.

Society for the Relief of Ruptured and Crippled, N. Y.—This society held its annual meeting at the Hospital, corner of Lexington avenue and Forty-second street, May 8, 1872. Dr. James Knight, surgeon-in-charge, reported that 245 crippled children were treated in the hospital during the past year, of whom 99 were relieved and discharged; 4 were incurable, and 7 died of intercurrent diseases; 125 remain under treatment. In the dispensary department, 3,178 out-patients were treated, including mechanical apparatus and surgical bandages.

Hudson County Pathological Society, N. J.—The officers of this society are as follows:—*President*, Dr. J. B. Burdett; *Vice-President*, Dr. F. E. Noble; *Secretary*, Dr. J. Q. Bird; *Treasurer*, Dr. W. J. Hadden.

Excision of the Kidney.—On the afternoon of May 16, 1872, Dr. George A. Peters removed from a male patient at St. Luke's Hospital the right kidney, for abscess of that organ.

Herbarium of Columbia College, N. Y.—Dr. John Torrey's herbarium at Columbia College is to receive a very large accession, by the addition of the herbarium of C. F. Meissner, Professor of Botany in the University of Basle. The collection embraces no less than 63,000 species, which, when added to the 40,000 of the Torrey collection, will form the largest herbarium in America.

Globe Pessary retained Seventeen Years.—At a late meeting of the new Obstetrical Society, Dr. Fordyce Barker related the subjoined case: An old lady of 71 years, who ceased menstruating at 52, and had had a bloody discharge from the vagina for about three years previously, was examined by him. Much to the surprise of the patient, a globe pessary was found high up, which was removed. She had been examined but once before in her life, and then by Dr. Meigs, seventeen years ago.—*American Journal Obstetrics.*

Epidemics of Rotheln.—To strengthen the description of Vogel, David Heggie, M.D., Brampton, Ont. (*Canada Lancet*), records, with observations, an extensive epidemic of this disease which has recently occurred in his town and neighborhood. As to the treatment in his cases, it was merely confinement within doors for two or three days—parallel symptoms being treated on their own merits.

Castor-Oil.—A correspondent of the Virginia *Clinical Record* suggests that this article may easily be made palatable by the employment of glycerine as an excipient:—

℞. Glycerini (puris) } ... āā ʒ ij.
Ol. ricini }
Ol. cinnamomi.....f ʒ j.
M.

Malingering Detected by Faradization and Nitrous Oxide Gas.—Julius Althaus, M.D. (*British Med. Journal*), relates a case of malingering detected by these agents. The patient, a male, professed to have

lost the use of his left arm, in consequence of an accident which he had three years previously. He had asked from a workingmen's benefit society the sum of £100, which is paid to members who are permanently incapacitated for work by disease or accident.

Delaware State Medical Society.—At the one hundredth annual meeting of the Medical Society of the State of Delaware, held at Lewes, in Sussex County, June 11th, 1872, Dr. G. Troupe Maxwell, of Middletown, late of Jacksonville, Florida, read a paper, setting forth his claims to being an original inventor of the laryngoscope, in 1859, and to the credit of having been first on this continent to see with this instrument—that of his own invention—the delicate organs which are revealed by that instrument. Upon motion of Dr. Askew, of Wilmington, the author was requested to put the paper in a more enduring form, by having it published in a medical journal.

The next annual meeting of this venerable society will be held in Middletown, Del., in June, 1873.

Connecticut Statistics.—There were in the State of Connecticut, last year, 13,114 births, 4,882 marriages, and 8,116 deaths. Four hundred and nine divorces were granted.

Lunatic Asylum at Worcester, Mass.—Dr. Merrick Bemis, the Superintendent of the Lunatic Asylum at Worcester, Mass., has resigned.

Accouchement of a Giantess.—*The Medical Press and Circular* states that the Nova Scotia Giantess, Mrs. Bates, *née* Miss Anna Swan, has been confined of a still-born girl. It measured from crown to heels twenty-eight inches, weighed eighteen pounds, and had many of its maternal progenitor's physical peculiarities and facial lineaments.

Poison Regulations in China.—The Chinese have some very severe regulations as to the sale of poisons. The sale of arsenical preparations is strictly prohibited, without evidence and witnesses as to the propriety of the sale. According to Dr. Porter Smith, both the seller and the buyer are decapitated if fatal results ensue; otherwise, they are both strangled. If the druggist ignorantly or carelessly sells the poison, he receives eighty blows.—*British Med. Journal.*

Dengue.—Indian reports announce that dengue or jungle-fever is very prevalent in Calcutta and the neighborhood. Almost every household has been attacked, and the suffering is severe, but it is rarely fatal. —*British Med. Journal.*

The Neill Prize.—At a late meeting of the Royal Society of Edinburg, Prof. Turner received the Neill prize and gold medal, for the triennial period ending 1871, for his papers on the "Great Finned Whale," and on the Gravid Uterus and the arrangement of the Fœtal Membrane in the Cetacea.

Medical Society of West Virginia.—The sessions of this society were held at Wheeling, West Va., June 5th, 6th, and 7th, 1872, and the following named officers were elected for the ensuing year:—*President*, Dr. R. H. Cumming, of Wheeling; *1st Vice-President*, Dr. Roemer, of Charleston; *2d Vice-President*, Dr. Davis; *3d Vice-President*, Dr. Moore, of Wellsburg; *Secretary*, Dr. William Dent; *Treasurer*, Dr. J. C. Hupp; *Censors*, Drs. Bates, Young, Allen, Hildreth, Hall, Safford and Davis; *Committee on Publication*, Drs. Bates, Hupp, Hildreth and Wm. Dent; *Committee on Necrology*, Drs. Hazlett, Berkebile, and Roemer; *Committee on New Remedies*, Drs. Jepson and Pipes; *Essayists*, Drs. Davis and Berry; *Committee on Medical Botany*, Drs. Hildreth, Wiesel, Bronson, Brownfield, Roemer, and Harris; *Committee of Arrangements*, Dr. Davis, and the members of the society in Parkersburg: *Committee on Climatology and Epidemics*, Drs. Roemer, Harris, Hildreth, Wilson, and Ramsey.

Cæsarean Operation in the United States.—Dr. Robert Harris, Phil., Pa. (*Am. Journal Obstetrics*), in a valuable paper on this subject, gives a table of the operations in the United States (17 cases), which were performed during or at the close of the first day of labor, showing the value of timely surgical interference. In all of the cases but one, the child was removed alive. Of these, 8 were white women: 9 were black women. Five white women recovered; 7 black women recovered. Children saved, 14. 73½ per cent. of women, and 86⅔ of children saved by operating early.

The comparative results of the Cæsarean operation in the two countries are as follows: Great Britain and Ireland, cases, 106, fatal, 88. Children saved, 60. United States, 60; fatal, 28. Children saved. 27.]

Imperforate Anus.—J. H. Pooley, M.D., Yonkers, N. Y. (*Am. Journ. Obstetrics*), details 38 cases of imperforate anus, the rectum communicating with the vagina. He remarks in the first place that it is not immediately or necessarily dangerous to life, for one of the patients is stated to have lived a hundred years. Three are stated to have borne children; two were in the habit of sexual intercourse, and their malformation was not discovered until they reached adult life. Others are stated to have reached the ages respectively of twenty, twenty-two, seventeen, and sixteen years. But in all these cases the unnatural opening must have been of unusual size, and in fact is stated in several to have been large enough to admit one or two fingers. These cases are therefore clearly exceptional. For though the fistulous communication may be sufficient to answer the demands of nature and avert danger during the early months of life, yet the danger is always imminent that, as the fæces become more and more abundant and more consistent, a fatal obstruction may occur.

The operation, whatever the special condition may be, consists essentially of two parts: first, to secure and maintain an opening into the bowel at the natural site of the anus; second, to close the unnatural opening into the vagina. The first is far easier of attainment than the other.

New Publications.

Books Received.

A Year-Book of Therapeutics, Pharmacy, and Allied Sciences, edited by Horatio C. Wood Jr., M.D., Prof. Med. Botany, University Penn. New York.: W. Wood & Co. 1872.

A System of Surgery, Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., LL.D., D.C.L., Oxon. Prof. Surgery, Jefferson Medical College, Phila. Fifth edition, in two vols. Philadelphia: Henry C. Lea. 1872.

Original Communications.

CASES OF

INFLAMMATORY CHANGES AND ATROPHY OF THE OPTIC NERVE AND RETINA.

RESULTS OF THE TREATMENT BY MERCURY AND POTASS. IODID. COMPARED WITH THOSE OBTAINED FROM STRYCHNINE.

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Since Nagel published his monograph upon the use of strychnine in cases of amaurosis and amblyopia dependent upon affections of the optic nerve and retina, the subject has excited a great deal of interest throughout the ophthalmological world, and ophthalmologists, spurred on to new experiments with the drug by the marvellous results gained by Nagel, have perhaps had their expectations raised too high, and have not confined themselves closely enough to his directions as to what forms of disease this treatment is applicable to, and hence have used it indiscriminately in all affections of the optic nerve and retina. As might have been expected, the results of such a general use of the drug have been on the whole unfavorable, and it has been dropped like many another one in past years, and seems likely soon to meet with unmerited abuse. For months back it has scarcely been possible to take up a journal without finding some mention of this method of treatment, and it is with no intention of attempting to give any new hints upon its use that the following cases are published, but simply for the purpose of comparing the results obtained by the treatment with strychnine with those gained in the old way by mercury, antiphlogistics, and iodide of potassium. Some of the cases were pure inflammation of the sheath and trabecular tissue of the optic nerve; some were cases of ischæmia papillæ or choked disk; and others again were cases of simple, primary atrophy of the nerve. They are twelve in number, six of which were treated by the old method, and six by the hypodermic injection of strychnine, and after giving the treatment and results in detail, it will be very easy to draw the conclusions which naturally follow.

I. *Secondary Atrophy of both Optic Papillæ.*—C. A., 30, married, England, roofer and painter, was admitted to the Manhattan Eye and Ear Hospital in the latter part of January, 1871. He stated that he had been a healthy man up to his 18th year, when he contracted a chancre, which was followed by enlargement of the inguinal glands, sore throat, alopecia, and osteoscopic pains. His father and mother were both healthy and lived to an advanced age. His business obliged him to boil paint in preparation for roofing, and he attributes his loss of sight to this occupation. About three months previous to admission he noticed a cloudy appearance before his left eye, and this soon occurred in the right one also. The dimness of vision has steadily increased until he now has merely perception of light in the left eye; in the right eye V. $= \frac{2}{70}$. He has never been a drinker of alcoholics, but admits having used tobacco to excess. Before his sight commenced to be affected, he had frequently suffered from severe headaches and vertigo. His vision is not improved by any glasses, and there is no binocular single vision, owing to the left eye never fixing. The tension is normal in both eyes. There is complete color-blindness in the inner and upper quadrants of the visual field of right eye, and in the rest of the field he only recognizes blue and yellow.

Ophthalmoscopic Examination.—Left Eye.—Almost complete white atrophy of the optic disk. The arteries are very small, and the white lines along the vessels are not only present upon the papilla, but extend for a considerable distance over the fundus, showing that the thickening of the adventitia of the vessels has extended very far. The disk is surrounded by a dense white ring, and there are absolutely no small vessels visible upon the disk. The refraction of the papilla was emmetropic, that of the central atrophic excavation M $\frac{1}{24}$, and that of the yellow spot M $\frac{1}{48}$. The layer of hexagonal cells, in which the rods and cones are embedded, was atrophied, and the choroidal vessels showed plainly through.

Right Eye.—The atrophic appearance was confined to the outer and lower half of the disk, and the arteries were not so small as in the left eye, but the veins were much more tortuous and engorged. The white lines along the vessels, though present, were much less pronounced than in the left eye. The refraction of the papilla was emmetropic, of the central atrophic excavation M $\frac{1}{24}$, and of the macula M $\frac{1}{48}$.

The patient was placed upon mercurial treatment, a drachm of the ointment being spread upon one arm from the shoulder to the elbow every night and morning, until symptoms of ptyalism appeared, and then a mixture of Potass. iod. gr. x., and Tinct. ferri chloridi gtt. x. given three times a day.

February 11, 1871. In the right eye vision had sunk from $\frac{2}{7}$ to $\frac{1}{20}$, the field of vision remaining about the same, and with no perceptible change in the ophthalmoscopic appearances. His left eye remained the same. His tobacco was then cut off, and the potash and iron given in increased doses. The patient remained under observation about three months, and during this time the vision steadily grew worse, until at the last examination it was only $\frac{1}{60}$ with the right eye; the left one remaining unchanged.

II. *Neuro-retinitis Descendens.*—J. K., aged 24, single, U. S., carpenter, was admitted to the Manhattan Eye and Ear Hospital December 7, 1870. He stated that he had always been healthy, with the exception of an attack of typhoid fever eight years previously, from which he soon entirely recovered. About three months ago he noticed one morning, on arising, a slight cloud before the left eye, which steadily increased in extent, and in about a week the same thing occurred in the right eye. For some time previously he had been troubled with headache and dizziness, and some vague rheumatic pains in the left knee and ankle.

Right eye, V. $= \frac{20}{20}$; *left eye*, V. $= \frac{20}{200}$, and no improvement by any kind of glasses. The field of vision of the *right eye* was normal in extent and without any defect, and the color perception was intact, though somewhat dulled at the periphery. The visual field of the *left eye* was defective in the inferior and external quadrant, and in this same region the color-sense was destroyed.

Ophthalmoscopic Examination.—Refraction of the *right nerve* + 36, of the *left nerve* + 24. The optic papillæ of both eyes very much inflamed and swollen, projecting perceptibly into the vitreous humor, the outlines indistinguishable from the rest of the fundus. The arteries and veins are both very much enlarged and distorted, and numerous hemorrhages, some large, some small, are to be seen scattered all over the fundus in the course of the veins. The whole retina is very

œdematous, so much so in spots as to conceal the vessels from view. The region round the macula is intensely congested in both eyes, though the swelling is here less. Leeches were applied to the temples, and the mercurial ointment rubbed into the arm from shoulder to elbow every night and morning until symptoms of ptyalism appeared. The mercury was then discontinued, and Potass. iodid. grs. x. administered three times a day, and carried up to toleration, which amounted in his case to grs. xl., three times a day; blue glasses were ordered.

December 19th. Right eye, V. = $\frac{20}{40}$; *left eye*, V. = $\frac{20}{200}$.
January 15, 1871. *Right eye*, V. = $\frac{20}{30}$; *left eye*, V. = $\frac{20}{100}$.
January 19, 1871. *Right eye*, V. = $\frac{20}{20}$; *left eye*, V. = $\frac{20}{70}$.
The field of vision is entirely restored in the left eye, but the color-sense remains somewhat dulled. Much of the hemorrhage along the vessels has disappeared, but considerable serous infiltration still remains in the optic papillæ and retinæ.

The patient now remained *in statu quo* for some time. There has at no time been any central scotoma.a.

February 7th.—R. E., V. = 1; L. E., V.= $\frac{20}{50}$. Signs of an abundant deposit of pigment in the retina have made their appearance, particularly in the left eye around the macula, and wherever there had been a hemorrhage of any considerable size there could be seen a patch of pigment.

February 22d.—R. E., V. = 1; L. E., V.= $\frac{20}{40}$ with some difficulty. Pigmentary deposit still increasing. The serous infiltration has entirely disappeared, and both nerves begin to assume a suspiciously gray appearance.

March 8th.—R. E., V. = 1; L. E., V. = $\frac{20}{30}$, and also U., A., and C. of XX. The pigment deposit in the region of the macula of the *right eye* is increasing in extent. The outline of the papilla of the *left eye* is perfectly distinct and the vessels are less tortuous.

March 22d.—R. E., V. = 1; L. E., V.= almost 1. Patient reading at 20 feet all the letters of XX. but E. and L.

April 19th.—Vision for the distance in both eyes is the same as at last date. *R. E.* reads Jaeger No. 8, *L. E.* reads Jaeger No. 9 at about 12″.

June 21st.—R. E., V. = 1; L. E., V. = almost 1. Reads Jaeger No. 8 with either eye. Masses of pigment very much increased in both eyes, particularly around the nerve and macula. Not much change in the nerves themselves, except the grayish hue. The patient has not used the blue glasses for about seven weeks, and has continued to work regularly at his trade, and says he can read the larger type of a newspaper.

Case III.—*Thomas Cooney*, 12 years of age, U. S., was admitted to the Manhattan Eye and Ear Hospital February 11th, 1871. For the last five years the patient has suffered from morbus coxarius of the right side, and the joint is now anchylosed and all suppuration has ceased. Three years ago he was suddenly attacked with vomiting, which continued for several hours, and the next morning vision in both eyes was obscured by a cloud, which increased in extent and density until in the evening he was totally blind. This total blindness lasted ten days, and then the vision gradually returned, and remained for a short time at nearly a normal standard, but afterwards gradually and steadily decreased. He has never suffered from any head symptoms nor from pain in the eyes, and his general appearance is that of a boy in robust health.

Right Eye, V. = dim perception of light; refraction emmetropic. *Left Eye*, V. = fingers in 5 feet; refraction emmetropic. There is no defect in the left visual field, nor any disturbance of the perception of colors.

Ophthalmoscopic Examination.—Right Eye.—Complete white discoloration of the optic papilla. The disk is surrounded by an atrophic ring of degenerated connective tissue of a still more brilliant white. Both arteries and veins are very small, and the white lines along the vessels are very distinctly marked.

Left Eye.—White discoloration of the inferior and external ¾ of the papilla, though the whiteness is not so marked as in the other eye. The arteries are small and their adventitia degenerated, but the veins are distended and tortuous.

The patient was placed upon the use of mercurial inunctions night and morning, accompanied by potass. iodid. grs. v. ter die, and at the end of a week the mercury was discontinued and the potash given in increased doses. The vision in the right eye remained the same, but in the left eye it slowly improved, so that at the end of April V. was equal to $\frac{20}{70}$; but beyond this point it never rose, although he has returned at stated intervals ever since.

Case IV.—*Neuro-Retinitis Descendens.*—H. R., 32, married, U. S., was admitted to the Manhattan Eye and Ear Hospital July 21th, 1871. Seven months ago the patient was delivered of her fifth child, and she has been weak and anæmic ever since. Two or three days after her confinement she was attacked with dysentery which lasted six weeks, and at that time she was troubled with dimness of vision and muscæ volitantes. She recovered from this, though severe headaches, coming on paroxysmally, still remained. On July 9th she was suddenly attacked by severe pain in the eyes, and the cloudy vision returned, accompanied by severe headache in the occipital region. She has suffered from uterine trouble for several years back, and has lately had intermittent fever of the tertian type. July 10th the cloud before the eyes thickened, and on the evening of that day she could not distinguish the brightest light from darkness. The amaurosis and headache continued until July 21st, when a leech was applied to each temple, and the bleeding kept up for an hour afterwards. That evening she could distinguish the stair-rods on the carpet, and thinks that on the date of admission she could see somewhat better. She cannot count fingers with either eye, but distinguishes the movements of the hand at four feet from the eyes. The pupils are moderately dilated, but react quite sluggishly.

Ophthalmoscopic Examination.—Slight haziness of the vitreous in both eyes. Marked congestion of both nerves and retinæ as well as great œdema, particularly in the right eye. There are no hemorrhages visible, nor any exudation save a serous one. The veins are very tortuous and distended with very dark blood. Refraction of both disks about H $\frac{1}{14}$.

Treatment.—Mercurial inunction to the arms continued for a week, and iron and quinine by the mouth, with a tepid bath every morning.

August 9th.—The gums have been slightly touched, and the mercury was discontinued, and potass. iodid. in grs. x. doses, ter in die, prescribed. The iron and quinine were continued. On the second day after the treatment was commenced, the vision began to improve rapidly, and at present date (Aug. 9th) it is in *right eye* $\frac{20}{XL}$, in the *left eye* $\frac{20}{XL}$. The exudation has entirely disappeared from the disks, but the veins are still swollen and distorted. The haziness of the vitreous is almost gone, but the outer halves of both papillæ are very white, though the arteries are not diminished in calibre.

August 18th.—V. = $\frac{20}{XXX}$ in both eyes. The outer halves of the papillæ show signs of progressive white atrophy. The arteries and veins are both diminished

in calibre, and there are some inflammatory changes commencing in the macula of the left eye. The inner halves of the papillæ are still somewhat congested.

September 22d.—Vision in the right eye is only $\frac{20}{XL}$; in the left eye about the same as at the last visit, perhaps a trifle better. Patient complains of pain in the right eye and temple. The atrophic changes in the choroid of the left eye are somewhat more advanced. Since this date the patient has not returned.

Case V.—*Atrophy of both Optic Nerves.*—S. S., 46, married, U. S., carpenter, was admitted to the Manhattan Eye and Ear Hospital June 7th, 1871. The patient has always been sickly, and when young he had an attack of pneumonia. He has always been more or less subject to malarial fever. In his youth he was a hard drinker, but now he scarcely ever drinks, and he has used no tobacco for five years. Five years ago he suddenly noticed one evening a cloud before his right eye, which increased so rapidly in density, and interfered so much with his vision, that in fifteen minutes he became entirely blind, and remained so for eleven weeks. Three months later he was attacked in the same way in the left eye, but remained blind in this eye for a much less time. While under a course of mercury and quinine for an attack of intermittent fever, his sight commenced to return in both eyes, and continued to improve up to eighteen months ago, since which time there has been no change. Headache and vertigo have occasionally been present.

Examination.—Right eye, V. = fingers in 2 feet; left eye, V. = fingers in 18 feet—reads Sn. CC. in 8 feet. No improvement in either eye by glasses. There is no central scotoma nor any limitation of the field of vision in either eye. There is, however, a very marked disturbance in the perception of color. With the *left eye* he only recognizes *blue* and *orange;* he calls *green, pink,* and *yellow* all *white;* and he does not recognize the remaining colors. All the colors grow darker and more indistinct towards the periphery. With the *right eye* he only recognizes *blue.*

Ophthalmoscopical Examination.—Both optic disks are of a dense white color when examined by the inverted image, and in the upright image assume a distinct bluish tint. The arteries are very small and in some places almost indistinguishable. Both disks are excavated down to the cribriform fascia, and the excavation extends all round to the margin of the disk. Both optic papillæ are surrounded by a secondary ring of atrophy, and this again partially by an incomplete ring of pigment. There are also atrophic changes scattered about all over the choroid, but particularly between the disk and macula.

The patient was placed upon the use of mercury by inunction, followed by potass. iodid. in doses of grs. x. ter in die, pushed to toleration, which in his case amounted to grs. xxx. three times a day. He also took a Turkish bath once a week. Under this treatment his vision improved somewhat in the *left* eye, so that at the end of two months he could read Sn. C. at 20 feet, but the vision in the *right* eye remained unimproved, and no further change for the better took place in the *left* eye. He was discharged from the hospital, after four months' treatment, much improved in his general health, but with no further change for the better in his vision than before stated.

Case VI.—*Neuro-retinitis Descendens,* ending in atrophy.—Wm. R., 50, Eng., married, sailor, was admitted to the Manhattan Eye and Ear Hospital April 17, 1871. He stated that he had been a tolerably healthy man, with the exception of an attack of the yellow fever fifteen years ago. He denied ever having had any venereal disorder, but admitted having been a hard smoker and drinker. Three years ago he had a severe attack of facial erysipelas. About the preceding Christmas his eyes commenced to trouble him, and he complained of flying specks and a blue cloud before his eyes. For some time this continued to grow worse, then it remained for a time at a stand-still, and afterwards grew better up to a month ago, since which time the vision has remained stationary. He has never had any pain in the eyes, and but little photophobia. The field of vision is unimpaired in either eye, and the color perception nearly normal, there being a slight difficulty in distinguishing between green and yellow at the periphery.

Examination.—*Right eye,* V. = $\frac{20}{200}$, *left eye,* V. = $\frac{20}{200}$, no improvement by glasses.

Ophthalmoscopic Examination.—Refraction of both eyes emmetropic. Both disks very much congested and their external halves infiltrated with a serous fluid. Veins very much engorged and tortuous, arteries not much altered in calibre. There are the remains of some hemorrhages into the retina, and the appearance of the retina and choroid is hazy and indistinct.

Two leeches were applied to each temple, and the following day the treatment by mercurial inunction was begun. Symptoms of ptyalism appeared at the end of the fifth day, and the mercury was then discontinued and potass. iodid. and iron administered three times a day. At the end of the third week after admission another examination was made, and all the signs of inflammation had nearly disappeared. The veins were still somewhat enlarged, but the arteries showed a distinct lessening of their calibre. The retina and disk had lost their indistinct outlines, and the outer half of each optic papilla showed a suspiciously gray appearance. Vision had improved in both eyes, so that with the *right eye* he could read Sn. C. at twenty feet, and with the *left eye* Sn. LXX. at twenty feet. At the end of another three weeks of the same treatment the vision had not improved, and the ophthalmoscope showed marked white atrophy of the outer halves of the two disks, with progressive diminution in the calibre of the arteries, and he was therefore discharged from the hospital, with directions to report at intervals.

Case VII.—Lafayette Decker, 27, U. S., single, machinist, was admitted to the Manhattan Eye and Ear Hospital November 10th, 1871. The patient stated that in August, 1865, while in the army, the sight of the *left eye* suddenly became dim without any premonitory symptoms, and this was accompanied by great pain in the eye and left side of the head. In the space of three weeks he became entirely blind, that is, he had merely perception of light in the *left eye,* and remained so for a number of weeks; and then the vision gradually returned until he could count fingers at one foot in the upper and inner part of the visual field, and he thinks the sight has remained about the same for the past three years. During all this time the vision of the *right eye* remained perfect, but on the morning of November 6, four days previous to admission to the hospital, a cloud appeared before the *right eye,* and vision diminished very rapidly, so that on the day of admission he had lost all power of fixation with the right eye, and had only slight perception of light. There is no color scotoma demonstrable in either eye, and no field demonstrable in the *right eye.*

Examination.—*Right eye,* no fixation; V. = perception of light. *Left eye,* concentric limitation of field of vision; V. = $\frac{20}{70}$. No color scotoma.

Ophthalmoscopic Examination.—*Right eye,* ischæmia papillæ, veins very much engorged, outline of the optic disk very indistinct, considerable œdematous infiltration of the papilla and retina, so that the refraction of the

papilla is II $\frac{1}{24}$ in an eye otherwise probably emmetropic, judging from the fellow-eye. *Left eye*, gray atrophy of the external two-thirds of the optic papilla, very small arteries with greatly thickened adventitia, and even some diminution of the venous calibre. The whiteness of the sclerotic ring round the disk is especially marked. No change in the choroidal epithelium or stroma. It was determined in this case to employ the hypodermic injection of strychnine, as the two different affections of atrophy and ischæmia papillæ were so well marked in his case. Strych. nitratis gr. $\frac{1}{40}$ was injected in the right temple, and in about ten minutes the patient himself noticed an improvement in the vision of the *right eye*, but no examination was made.

Nov. 13th. R. E., V. = fingers in 6 inches, L. E., V. = $\frac{20}{40}$. Strych. nitr. gr. $\frac{1}{30}$.

Nov. 15th. R. E., V. = fingers in 12 inches, L. E., V. = $\frac{20}{40}$. Strych. nitr. gr. $\frac{1}{25}$.

Nov. 16th. Dark day, no examination. Strych. nitr. gr. $\frac{1}{25}$.

Nov. 17th. R. E., V. = fingers in 6 feet, recognizes blue, red, and yellow. L. E., V. = $\frac{20}{40}$, reads No. 3 Jaeger at one foot. Strych. nitr. gr. $\frac{1}{25}$.

Nov. 18th. Dark day, no examination. Strych. nitr. gr. $\frac{1}{25}$.

Nov. 20th. R. E., V. = $\frac{20}{200}+$; L. E., V. = $\frac{20}{30}$. Strych. gr. $\frac{1}{25}$.

Nov. 22d. R. E., V. = $\frac{1}{7}+$; L. E., V. = $\frac{20}{30}$. Strych. nitr. gr. $\frac{1}{20}$.

Nov. 27th. R. E., V. = $\frac{1}{10}$; L. E., V. = fingers in 1 foot. Sudden diminution in the visual power of both eyes, and on examination with the ophthalmoscope both optic disks were seen to be deeply congested. Strych. nitr. gr. $\frac{1}{20}$.

Nov. 29th. R. E., V. = $\frac{1}{8}$; L. E., V. = fingers in 1 foot. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 1st. R. E., V. = $\frac{1}{6}$; no limitation of visual field. L. E., V. = fingers in 2 feet. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 6th. R. E., V. = $\frac{1}{4}$; L. E., V. = fingers in 4 feet. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 8th. R. E., V. = $\frac{2}{5}+$; L. E., V. = fingers in 5 feet. Strych. gr. $\frac{1}{20}$.

Dec. 11th. R. E., V. = $\frac{2}{5}+$; L. E., V. = $\frac{1}{4}$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 13th. R. E., V. = $\frac{1}{4}$; L. E., V. = $\frac{1}{5}$; the left optic disk shows a very strong tendency to atrophic cupping, and in the horizontal meridian of the fundus are minute white spots of exudation, the results of a secondary inflammatory process. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 15th. R. E., V. = $\frac{20}{40}$; L. E., V. = $\frac{}{60}$. Strych. nitr. gr. $\frac{1}{20}$; the inner half of the papilla of the right eye is very indistinct, and the blurred condition encroaches upon the rest of the fundus.

Dec. 18th. R. E., V. = $\frac{20}{40}+$; L. E., V. = $\frac{20}{70}$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 22d. R. E., V. = $\frac{20}{40}$; L. E., V. = $\frac{20}{40}$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 29th. R. E., V. = $\frac{20}{30}$; L. E., V. = $\frac{20}{70}+$. Strich. nitr. gr. $\frac{1}{20}$; the field of vision of the right eye is defective upwards, outwards, and downwards; that of the left eye is defective everywhere.

Jan. 5th. R. E., V. = $\frac{20}{20}$; L. E., V. = $\frac{20}{70}$. Strych. nitr. gr. $\frac{1}{15}$.

Jan. 12th. R. E., V. = $\frac{20}{20}$; L. E., V. = $\frac{20}{100}$. Strich. nitr. gr. $\frac{1}{15}$; peripherical vision of the *left eye* is not entirely absent, but is very defective. There is no color scotoma. There is no limitation of the field of vision of the right eye. This patient is still under treatment, and it seems to me that the same process would have resulted in the *right eye* as is now present in the *left eye*, *i. e.*, progressive white atrophy, if the case had not been at once taken in hand and treated carefully. Whether we should have gained equally favorable results from the use of mercury and potass. iodid. is an open question.

Case VIII.—John K., 33, Ireland, married, blacksmith, was admitted to the Manhattan Eye and Ear Hospital December 4th, 1871. He stated that he had always been a perfectly healthy man until last May, when one evening he caught cold in his *right* eye, and that night it became very much inflamed, and the next morning he could not lift his upper eyelid. This condition of things lasted for two months, and then commenced to get better; but simultaneously with the recovery from the ptosis his sight commenced to fail and grew rapidly worse. Early in October the vision of the *left* eye commenced to fail just as it had done in the *right* eye. He has never had any head symptoms of any kind, and his general health has remained good.

Examination.—R. E., V. = fingers at 18 inches; L. E., V. = $\frac{20}{70}$. No visual field demonstrable in the *right* eye. No limitation of the visual field and no color scotoma in the *left* eye.

Ophthalmoscopic Examination.—R. E. The whole disk is grayish-white in color, but the vessels are not much changed either in their calibre or course. The white ring round the papilla, the results of a perineuritis, is very marked, and the outer $\frac{1}{3}$ of the disk is somewhat swollen and reddened. There are patches of choroidal atrophy in the equatorial region, and a deposit of pigment at the external margin of the disk, the latter probably congenital. *Left eye.*—Gray atrophy confined to the outer half of the disk; pigment deposit around the external margin of the papilla; the arteries are small, their adventitia hypertrophied, and the results of a recent perineuritis are marked. Though we have no history of any head symptoms, yet a cerebral origin, resulting in a neuritis descendens, may be suspected. Strych. nitr. gr. $\frac{1}{40}$ was injected hypodermically in the temple.

Dec. 5th. R. E., V. = fingers at 18 inches; L. E., V. = $\frac{20}{50}$. Strych. nitr. gr. $\frac{1}{40}$.

Dec. 6th. R. E., V. = somewhat worse; L. E., V. = $\frac{20}{40}$. Strych. nitr. gr. $\frac{1}{30}$.

Dec. 8th. R. E., V. = fingers in 1 foot; marked eccentric limitation of visual field, and marked color-blindness, only recognizing yellow. L. E., V. = $\frac{20}{40}$. The ring of perineuritic atrophy in both eyes is very irregular in shape and extent. The ring of pigmentary deposit round the papillæ is increasing. There is a ring of perineural atrophy, then a ring of congested, œdematous retinal tissue, and then the ring of pigment deposit most external. In the *right* eye there is one large spot of reddish exudation in the macula, and several similar spots between the latter and the disk. Strych. nitr. gr. $\frac{1}{30}$.

Dec. 11th. R. E., V. = fingers at 1 foot; L. E., V. = $\frac{20}{30}$. Patient complains of a soreness and dull pain in both eyes and has had no sleep for two nights. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 13th. R. E., V. = fingers at 1 foot; L. E., V. = $\frac{20}{}$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 15th. R. E., V. = fingers at 1 foot; L. E., V. = $\frac{20}{30}+$. Strych. nitr. gr. $\frac{1}{20}$. Arteries of the right optic disk extremely small. Fatty changes in the macula are increasing in size.

Dec. 18th. R. E., V. = fingers in 18 inches; L. E., V. = $\frac{20}{30}$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 22d. R. E., V. = $\frac{6}{200}$; L. E., V. = $\frac{20}{30}+$. Strych. nitr. gr. $\frac{1}{20}$.

Dec. 27th. R. E., V. = $\frac{5}{200}$; L. E., V. = $\frac{20}{30}+$. Strych.

nitr. gr. $\frac{1}{15}$. The field of vision of *right* eye is widening downwards and outwards.

Dec. 29*th*. R. E., V. = $\frac{6}{200}$ with lower and inner half of retina; L. E., V. = $\frac{20}{200}$, all but E. and G. Strych. nitr. gr. $\frac{1}{15}$. Pupil of the *right* eye for the first time reacts to slight illumination. Complete color-blindness of *right* eye; he calls all colors white except yellow. No disturbance of the color-sense in *left eye*. Strych. nitr. gr. $\frac{1}{15}$.

Jan. 5*th*. 1872. R. E., V. = $\frac{5}{200}$; L. E., V. = $\frac{20}{20}$. Fatty exudations in the region of the macula of the *right* eye are extending downwards; vision remains eccentric, confined to the inner half of the retina.

Case IX.—E. D., 40, Scotland, widow, seamstress; applied for assistance at the New York Dispensary July 26th, 1871. The patient stated that she had never had any trouble with her eyes till about five years ago, when the vision of the left eye commenced to fail, and soon after the trouble appeared in the right eye. The sight grew gradually but steadily worse, and she describes the trouble as if a fog were drawn before the eyes, which increased in density. She has never suffered from flashes of light nor from *muscæ volitantes*. Pain has been felt in the eyes at irregular intervals, and is at times very intense. There have never appeared any flashes of color before the eyes, but she has had great difficulty in distinguishing colors, and says that there were some which she could not distinguish at all. For some years she has been obliged to use her eyes a great deal for sewing, particularly late at night. Her general health has all the time been good. Two months ago she left off working at night, and has since taken a great deal of exercise, and she thinks that the sight is better, and the difficulty of distinguishing colors is less marked.

Examination.—R. E., V. = $\frac{20}{40}$+; L. E., V. = $\frac{20}{40}$+, no improvement by glasses. No limitation of field of vision in either eye, and the sense of color is only blunted towards the periphery.

Ophthalmoscopic Examination.—Refraction about emmetropic. Some œdema of the centres of both disks. The outer halves of both disks are of a dirty-white color, and the retinal arteries show some diminution of calibre. There is a deposit of pigment along the outer margin of both disks. The atrophic changes are somewhat more marked in the right eye. There are no central scotomata.

Strych. nitr. gr. $\frac{1}{30}$ was injected hypodermically into the temple, and in about six minutes the patient said that objects seemed clearer than before, and this clearing up of the visual field continued for some minutes, after which there was no further change.

July 29*th*. R. E., V. = $\frac{20}{30}$; L. E., V. = $\frac{20}{30}$+; patient reads No. 8 Jaeger without a glass. The range of accommodation is considerably limited. Strych. nitr. gr. $\frac{1}{30}$.

August 1*st*. R. E., V. = almost $\frac{20}{20}$; L. E., V. = $\frac{20}{20}$; reads Jaeger No. 4 without a glass. Strych. nitr. gr. $\frac{1}{30}$.

August 3*d*. R. E., V. = 1 ($\frac{30}{20}$); L. E., V. = $\frac{20}{20}$; reads Jaeger No. 3 without a glass. On examination with the ophthalmoscope the atrophic process seems to have been brought to a stand-still; there is no extension of the white color to the rest of the disk, and no further diminution in the calibre of the arteries. The patient was told to spare her eyes as much as possible for a time, and to report herself once a week, but she never appeared again, and it is therefore impossible to say whether the effect is permanent.

Case X.—W. S., 28, U. S., single and a butcher, applied for treatment at the New York Dispensary August 8th, 1871. The patient stated that he had always been a healthy man, except about six years ago, when he had a gonorrhœa. About eighteen months ago he noticed one morning while reading the paper that the letters suddenly ran together, and everything seemed covered with a fog. Since that time both eyes have been affected about in the same degree, and vision he thinks has remained about the same, with perhaps a very slight difference in favor of the right eye. There have been absolutely no head-symptoms. The patient admits having used tobacco and alcoholic stimulants to excess for a number of years.

Examination.—*Right eye*, V. = fingers at 10 inches; *left eye*, V. = fingers at 10 inches. The visual field seems to be normal for the near point, but there is no fixation with either eye for the distance, and no binocular single vision. He recognizes colors with the exception of *yellow*, which he calls *red*, and *green*, which he calls *white*.

Ophthalmoscopic Examination.—*Right eye*, refraction, M $\frac{1}{30}$. Gray atrophy of the outer and lower quadrant of the optic papilla, with atrophic changes in the region of the macula lutea. The veins are distended and tortuous, and the arteries are very much lessened in calibre. *Left eye*, refraction, M $\frac{1}{24}$, gray atrophy extending over the whole of the optic disk, with marked atrophic changes in the region of the macula. The veins are large and tortuous, the arteries so small as to appear like threads, and their adventitia is very much hypertrophied.

Strych. nitr. gr. $\frac{1}{30}$ was injected hypodermically in the temple, and in ten minutes the patient volunteered the statement that he could see objects at a distance much more distinctly.

August 10*th*. *Right eye*, fingers at 3 feet; *left eye*, V. = fingers at 2 feet; no fixation for the distance with either eye. Strych. nitr. gr. $\frac{1}{30}$.

August 15*th*. *Right eye*, V. with −36 = fingers at 20 feet; fixation is now good, and an examination shows a defect of the visual field downwards and outwards. *Left eye*, V. with −24 = fingers at 6 feet; field of vision is not demonstrable. Strych. nitr. gr. $\frac{1}{24}$.

August 17*th*. *Right eye*, V. with −36 = $\frac{20}{100}$; without the correcting glass, the defect in the visual field has grown somewhat less. *Left eye*, with −24 V = fingers at 6 feet; periphery of visual field becoming somewhat more distinct. Strych. nitr. gr. $\frac{1}{24}$.

August 19*th*. *Right eye*, with −36 V. = $\frac{20}{70}$, but somewhat eccentric. Field of vision about the same, but he now recognizes *yellow*, though he is somewhat doubtful about *green*. Left eye, with −24 V. = fingers at 6 feet. Strych. nitr. gr. $\frac{1}{20}$.

August 22*d*. *Right eye*, with −36 V. = $\frac{20}{40}$; defect in the visual field still remains. *Left eye*, with −24 V. = fingers in 10 feet; general concentric limitation of the field of vision. Strych. nitr. gr. $\frac{1}{20}$.

August 24*th*. *Right eye*, with −36 V. = $\frac{20}{30}$ almost; reads Jaeger No. 8 with some difficulty at 10 inches from the eye. *Left eye*, with −24 V. = fingers at 10 feet. Strych. nitr. gr. $\frac{1}{20}$.

August 31*st*. Vision in both eyes remains the same as at last date. Strych. nitr. gr. $\frac{1}{20}$ was injected, and he was told to report about once in two weeks. He has been seen a number of times since, the last about Jan. 1st, 1872, and at that time the vision of the right eye was $\frac{2}{3}$, but that of the left eye had grown worse, and he could only count fingers at 6 feet.

Case XI.—M. S., 38, married, Germany, applied at the N. Y. Dispensary for aid September 7th, 1871, with the complaint that she was totally blind. Up to six years ago the patient was a perfectly healthy woman, at which time she married and came to this country. Shortly after her arrival here she was seized

with a severe pain in her back, which followed the course of the ureters, and sometimes seemed to shoot up the spinal cord into the head. She became subject to metrorrhagia, accompanied by great pain. Pain in the chest and side has also been constant. About two years ago she developed signs of insanity, as her husband thinks, though she has always been a nervous and complaining woman since her marriage. She has never been pregnant, and for the last two years has been a hard drinker. About a year ago she commenced to complain of severe headaches, which were at first intermittent in character, accompanied by frequent attacks of vertigo, and about the same time the sight of the left eye commenced to fail, and shortly after that of *right eye*. The failure of vision was gradual, and for the last six months the patient has not been able to distinguish light from darkness with either eye. An examination with oblique illumination proves conclusively that absolute amaurosis is present.

Ophthalmoscopic Examination.—Right eye, refraction −48. Dense white atrophy of the entire papilla and of the retina; arteries almost imperceptible; veins somewhat fuller than normal. Deposit of pigment along the lower, inner, and upper margin of the disk. Central atrophic excavation of −20 refraction. *Left eye*, refraction −48. Brilliant white atrophy of the whole disk. Almost exactly the same appearances here as in the fundus of the other eye. It is the most marked case of optic-nerve atrophy that I have ever seen, evidently originating in some brain lesion, and of course a most unfavorable case to submit to any treatment. Strych. nitr. gr. $\frac{1}{30}$ was injected hypodermically every day for a week, and then the dose was increased to gr. $\frac{1}{20}$ every second day, and this was kept up for two weeks, but there was absolutely no improvement, and after a month's trial the case was given up.

Case XII.—D. M., 50, widow, Ireland, seamstress, applied for aid at the N. Y. Dispensary October 17th, 1871. About twelve years ago she became annoyed by the appearance of muscæ volitantes before both eyes, and shortly afterwards a cloud appeared simultaneously before both eyes, which has gradually increased in extent and opacity. The patient has never had any head symptoms nor any pain in the eyes. She has always been myopic, but there is no insufficiency of the internal recti muscles, and her general health is good.

Examination.—Right eye, V. = $\frac{20}{100}$; *left eye*, V. = fingers in 12 feet. No improvement by glasses. The visual field is eccentrically defective in both eyes. Reads Jaeger No. 12 with −30 with the right eye. No disturbance in the color function of either eye.

Ophthalmoscopic Examination.—Refraction of either eye −16, atrophic degeneration of the optic disks, retina, and choroid of both eyes, more pronounced in the left eye. The atrophic process is accompanied by a peculiar form of excavation of the disk, which is confined to the upper and outer portions of the disk. In the left eye there are atrophic changes in the region of the macula, and spots of choroidal atrophy are scattered all over the fundus of both eyes, each one being surrounded by a ring of pigment. The refraction of the excavation of the *left* optic disk is −7, and of the *right* −9. The arteries are very small, and all the vessels are bent in a peculiar manner upon themselves at the border of the excavation. Strych. nitr. gr. $\frac{1}{30}$ was injected hypodermically in the temple.

October 19th. R. E., V. = $\frac{20}{70}$; L. E., V. = fingers at 18 feet. Strych. nitr. gr. $\frac{1}{30}$.

October 21st. R. E., V. = $\frac{20}{50}$; L. E., V. = $\frac{20}{200}$. Strych. nitr. gr. $\frac{1}{30}$.

October 24th. R. E., V. = $\frac{20}{40}$; L. E., V. = $\frac{20}{100}$. Strych. nitr. gr. $\frac{1}{24}$.

October 26th. R. E., V. = $\frac{20}{40}$; L. E., V. = $\frac{20}{70}$. Strych. nitr. gr. $\frac{1}{24}$.

October 28th. Vision in both eyes remains the same as at last date. The injections of strychnine were continued three times a week for three weeks longer, but with no further improvement in the vision, and the patient was discharged, with orders to report once a month. On January 2d, 1872, the vision remained the same as on Oct. 26th, 1871.

Having thus given the history of each case somewhat in detail, we are better able to compare the results of the two modes of treatment.

The first six cases were treated by mercurial inunction and potass. iodid. The *first* case was one of progressive secondary atrophy of both nerves, with steady diminution in the power of vision. Here the treatment proved of no avail in arresting the course of the disease, already far advanced. The *second* case was one of neuro-retinitis descendens, a recent inflammatory process, and here the treatment by mercury caused a rapid improvement. A curious point in the case was the continuance of serous infiltration of the retina, after the absorption of the hemorrhages. Beyond a certain point there was a long period of non-improvement.

The *third* case was one of simple atrophy of the optic disk, with some points in its history giving rise to the supposition that it might have been due to an embolus of the central artery. Here there was very little improvement by the mercurial treatment.

The *fourth* case was one of neuro-retinitis descendens. The dimness of vision coming on previously during an attack of dysentery, as well as the secondary acute inflammation, was undoubtedly due to anæmia. Here the mercury produced marked improvement in the vision, and the cure remained permanent.

The *fifth* case was one of simple atrophy of the optic papillæ, and after a fair trial of the mercurial treatment there was no improvement.

The *sixth* case was one of neuro-retinitis of long continuance, in which there was some slow improvement under the mercurial treatment, but the disease afterward went on to complete atrophy, probably because of the treatment not having been commenced early enough.

The *seventh* case was one of ischæmia papillæ of one eye and atrophy of the other. After the injection of the nitrate of strychnia there was a rapid improvement in the vision, noticed by the patient himself. In the course of the treatment a neuro-retinitis was developed in both eyes, followed by a slow improvement in the *right* eye, and tendency to atrophic cupping in the *left*, with steady diminution of vision.

The *eighth* case was one of interstitial atrophy of both disks, complicated with choroidal trouble in the right eye. Steady improvement under the use of strychnine in the *left* eye, and later some improvement in the vision of the right eye.

The *ninth* case was one of discoloration of the papillæ premonitory of atrophy, with marked diminution of the range of accommodation. Steady improvement under the use of strychnine, ending in complete restoration of the vision and of the range of accommodation.

The *tenth* case was one of interstitial atrophy of the optic nerve, from abuse of alcoholics and tobacco. Slight improvement in the vision of the *left* eye, and great improvement in that of the *right* eye, up to nearly the normal standard, under the use of strychnine.

The *eleventh* case was one of complete atrophy of the nervous fibrillæ, dependent on some brain-lesion. No improvement from the use of strychnine after a month's trial.

The *twelfth* case was one of atrophy of the connective-tissue framework of the nerve and choroid, in which there was marked improvement from the use of strychnine. Looking over the cases once more, I think we may draw the conclusion that in case of recent inflammation, such as neuro-retinitis, the treatment by mercury seems to give the best results; for strychnine seems to exert but little influence upon a recent inflammatory process. But in all the other cases, whether recent or chronic, provided the disease has not lasted a long time, we gain the most rapid and permanent improvement from the use of strychnine. In one case only did it fail, and here there was manifestly complete atrophy of the nerve-structure. At some future time I hope to increase the number of cases which may aid in corroborating the above view.

No. 7 West 46th Street.

THE INTRA-UTERINE GALVANIC PESSARY.

By ALEXANDER MURRAY, M.D.,

NEW YORK.

Having used for the last four years the different forms of the galvanic pessaries, I can with confidence recommend them as well fitted for the special object for which they are employed; that is, to keep up a mild, steady galvanic current in the uterus. By such gentle and continued stimulation of the whole uterine system, the functions of the uterus are thus excited to the proper performance of their duty, or recalled when they have been suspended; while, on the other hand, galvanism in my hands has frequently failed to restore the menstrual discharge when applied directly for that special purpose, and has at times recalled the secretion even when it has ceased to flow for several years, when used in the treatment of other diseases remote from the uterine region. Faradization is a more potent emmenagogue, and seldom fails to restore the menses when suspended either from cold or other slight causes. I have sometimes restored the catamenial flow while the patient has been in my office. Usually, after the third or fourth application, I use the secondary current daily as strong as can be borne, commencing a few days before the expected monthly period; by applying it to the spine and over the ovaries, or with my adjustable intra-uterine and ovarian electrodes.

From the use of Sir James Y. Simpson's pessary I have derived most satisfactory results; I can say the same conditionally of Dr. Noeggerath's. That of Dr. Thomas's, however, has not answered my expectation, although a very ingenious and apparently a very desirable instrument. The central wire is too thin, allowing it to bend too easily, and thus rendering it difficult to be inserted in the uterus. Any physician who will take a profile view of the pessary will at once see that an instrument so constructed will necessarily make a counterpart shape of the pessary in the lining membrane of the uterine canal. Practically, he will find also that if worn for a few weeks it will be very difficult to remove it from the uterus. An accident happened to me while removing one; the central copper wire which held the beads in position broke when attempting to withdraw it, while the remaining portion of the pessary, which was in the body of the uterus, gave me considerable trouble to extract, owing doubtless to the irregular wavy shape of the uterine cavity, caused by the use of the instrument. I have improved the pessary by having the central copper wire insulated, the beads made oblong in shape, and with truncated ends, so that when the series of beads are in position, the stem will present a comparatively smooth level surface. I have also insulated every pair of beads (copper and zinc), and substituted for the bulb of hard rubber a disk of copper. By this arrangement I have formed a neat voltaic pile of five or six elements, and an instrument of some degree of intensity.

2 3 1 5 6 4

1. Sir J. Y. Simpson's. 2. Dr. Noeggerath's. 3. Dr. Thomas's. The artist in this drawing represents a metallic disk instead of a round bulb of hard rubber similar to No. 2. 4. Dr. Thomas's, improved. 5 and 6. Dr. Murray's.

My pessary is made of a thick wire of copper No. 16, insulated with rubber or gutta percha, on one end of which a fine wire, No. 22, of zinc, is attached (not soldered). This wire is wound around the outside of the insulation in a groove about one-twelfth of an inch apart, and sufficiently deep to allow the wire when placed in position to be on a level with the insulated surface. The other end of this wire is fastened to a ring of zinc about one-fourth of an inch of the disk. The latter is made of copper, cup-shaped, with the edges well rounded and smooth to accommodate itself to the form of the neck of the uterus. Although this pessary answered the purpose intended, yet it was unreliable owing to the fragile nature of the zinc wire, which was at any time liable to be broken when wound around the stem, and thus destroy the continuity of the galvanic current. To avoid this probable defect, and to carry out the same principle in a more secure and permanent manner, the new pessary No. 5 is introduced. It is a simple contrivance, and one that will be found to answer fully and practically the special purpose for which it is designed.

MY NEW GALVANIC PESSARY (PROPER).

The stem is made of pure zinc with a hole running through its centre longitudinally, in which an insulated copper wire is inserted, one end of this wire is attached to a small knob of zinc to form the point of the stem, the other end passes through a disk of copper, and is fastened to a small quadrangular-shaped nipple of copper. This is perforated with a small hole to allow a ring to be suspended from it. This ring is made of fine copper wire twisted into a cord about three inches in circumference, for the purpose of removing the instrument when required, and also *to present more metallic surface to be acted upon by the normal acid secretion of the vagina, and thus generate a mild galvanic current.* The connection between the disk of copper and the zinc stem is insulated with a thin layer of hard rubber. The shape of the nipple is such as will allow it to be grasped by a pair of forceps to aid in introducing the

pessary, if such a proceeding should be deemed necessary.

THE DIFFERENT FORMS OF PESSARIES.

Sir J. Y. Simpson's are of various sizes and thicknesses; the stem, lower half, and bulb are made of copper, and the remaining half of zinc. That of Dr. Noeggerath's is made of the same metals, arranged in two parallel pieces the whole length of the stem, with the end screwed into a bulb of vulcanite. The pessary of Dr. Thomas is made of copper and zinc beads of a globular shape (about the size of No. 4 shot), arranged alternately to form the stem, and with a copper wire running through the centre of each bead, and soldered to a thick piece of copper wire which is inserted into a bulb of hard rubber. In another form of pessary which I have made and used, but have rejected after a trial in two cases of dysmenorrhœa, the stem and disk are made of either zinc or silver. There is an insulated cord about fourteen inches in length, one end of which is attached to the disk, and the other to a thin oval plate of copper two by three and one-half inches wide, and covered with felt or chamois leather, so that it can be applied either to the spine or over the uterus. My patients disliked to wear this instrument, owing to the irritation caused by the dangling of the cord between the vulva, which interferes indirectly with micturition or defecation, and creates excessive moisture about the external genitals. The instrument was liable also to be pulled out of the uterus by accidentally touching the cord through outside pressure of the clothes against it.

My pessary is now undergoing the crucial test. In two cases I have used it with manifest success. In one of these cases it had been worn for eleven weeks, and in the other seventeen. Both were cases of amenorrhœa, with imperfect development of the uterus at puberty, differing only in degree. They had previously resisted all the usual modes of general and local treatment except electricity, which had not been employed. In two cases of dysmenorrhœa with scanty menstrual discharge, one wore the pessary nine weeks, and the other thirteen. In the third case of dysmenorrhœa with anteflexion the instrument was worn sixteen weeks; all of these cases are so far attended with satisfactory results.

I have used pessaries made with a stem of zinc and a disk of silver; but I prefer the instrument already described, as I believe that in its construction I have accomplished all that is practically desirable in the galvanic pessary. Whenever I wish to excite an immediate galvanic action when the pessary is in the uterus, I simply moisten the sponge used to support the pessary with distilled vinegar diluted with four parts of water, and allow it to remain in contact with the disk of the instrument. Sometimes I use a little cotton batting wet with the dilute acetic acid, and apply it around the disk. Generally I wait for a few days before I employ any acid, in order to ascertain if the pessary can be worn without causing any pain or disagreeable sensations.

The new pessary is made of zinc and copper. The desirableness of this arrangement is made clear by facts tested by experiments. We find that when this instrument has been worn in the uterus for a short time, that the alkalies go to the zinc and the acids to the copper, or in other words, that the zinc is coated over with the salts of soda and potash, etc., and the copper sometimes as bright and clean as if dipped in dilute nitric or sulphuric acid. A mild electrolytic action is practically apparent from this result, and a fact clearly established to guide us in the construction of the galvanic pessary.

Nature's laws of working in a healthy condition must be obeyed, not changed or neutralized. We know that the secretion of the uterine canal if in its normal state is *alkaline*, while that of the vagina is *acid*. To undo these natural conditions would be to inflict an injury on the whole animal economy.

Our object is to restore these secretions when deficient or abnormal, rather than substitute others which are not natural.

I have come to the conclusion after repeated experiments with the different metals, that no metal can equal the zinc, and that it is the only one that should be employed in the stem of the intra-uterine galvanic pessary. The vaginal disk is not of so much importance as to whether we should use silver or copper, yet I find that the copper is the most suitable, as it is an electro-negative and generating metal towards zinc, and less liable to the fluctuating power which we occasionally witness in the silver. Zinc and copper work well together when arranged in their proper proportions, and keep up a steady, gentle, continuous current with the aid of a very small portion of acid.

Now, suppose we were to use a copper stem in the uterus with a disk of zinc in the vagina, what results would we expect from the facts above stated? We should find that the normal alkaline secretion of the uterine canal would be more or less neutralized or rendered acid, thus reversing the chemical nature of the natural mucus secretion. The alkalinity of the uterine secretion is for a wise and special purpose.

The improved pessary is constructed on purely scientific electrical principles, or in other words, on an electro-chemical basis, and is not a mere mechanical instrument. The therapeutic use of the instrument is soon apparent. It excites the nervous power, and calls into action the suspended uterine functions should they be in a torpid or diseased state. What change it may effect directly in the blood I am not prepared to say. However it is evident that the alkaline secretion is not changed if the proper pessary is used, but increased if deficient, and restored to a healthy condition if in an abnormal state. This change is not so much through the chemical action exercised by the use of the pessary, as by its mild galvanic influence, which induces a healthier state of the parts engaged.

THE LENGTH OF THE PESSARY.

The length of the stem should range from one and one-half to two and one-third inches, and should vary in thickness, ranging from one-eighth to one-fourth of an inch, and of three sizes within the above measurements. In addition I make two larger sizes to be used in sub-involution of the uterus. The length of the stem should *not* in any case, when introduced into the uterus, *touch the fundus*, and should be of sufficient thickness to fill the canal. It is always desirable to ascertain the length of the uterine cavity with Simpson's uterine sound; the thickness of the stem that may be required by means of Peaslee's uterine bougies previous to the introduction of any form of uterine galvanic pessary. The stem of the pessary should be at least one-third of an inch *shorter* than the uterine canal, and corresponding in size to its transverse diameter.

CASES IN WHICH THE PESSARY CAN BE BENEFICIALLY USED.

1. Imperfect development of the uterus at puberty.
2. Super and sub-involution of the uterus.
3. Atony of the uterus and ovaries.
4. Amenorrhœa from atrophy of the uterus.

5. When the menstrual discharge has appeared, but is not yet fully established in consequence of a torpid state of the vaso-motor nerves of the ovaries and uterus.

6. Vicarious hemorrhages, or threatening signs of phthisis, etc.

7. Amenorrhœa from shocks, colds, or mental anxiety.

8. Structural diseases of the ovaries.

9. Dysmenorrhœa and flexions of the uterus.

10. Contortion of the uterine canal, dependent on irregular hypertrophied condition of the uterus.

11. Sterility.

DIRECTIONS FOR INTRODUCING THE PESSARY.

Place the patient on her back (or left side if preferred), with the knees well drawn up close to the abdomen; then let one or two fingers of the left hand, well oiled, be introduced into the vagina, until they come in contact with the os uteri. With the right hand holding the pessary, glide it along the palmar surface of the fingers into the vagina until the point of the pessary enters the orifice of the neck of the uterus; then push it upwards into the uterine canal as gently as possible with the thumb or fingers of the right or left hand, whichever of them may be found most convenient, until the disk is in direct contact with the cervix. But should the uterus recede out of reach of the fingers while endeavoring to introduce the pessary, let it be drawn down, and held fixed by means of a tenaculum hook inserted into the cervix. And should any difficulty be experienced in passing the pessary through the *os internum*, use one of Peaslee's uterine bougies, No. 1, 2, or 3 according to the diameter of the uterine cavity, and allow it to remain *in utero* for half an hour or more. Immediately after removing it, insert the pessary, which will be found to enter the uterine cavity without causing any pain. Usually there is no great difficulty experienced in introducing the instrument, although occasionally some skill and dexterity will be required.

It is not advisable to use the intra-uterine galvanic pessary in the young and unmarried unless symptoms of a sympathetic or secondary nature, dangerous to the health of the patient, occurs, and where the obstinacy of the case has resisted the usual general and local treatment.

Sir James Y. Simpson recommends the use of a gutta-percha pessary, such as is used for prolapse of the uterus, to maintain the intra-uterine galvanic one *in situ*. I find that the application of a small piece of soft sponge or a little cotton batting, carefully placed in the vagina, and in contact with the disk of the pessary, will prevent it slipping from the uterus. The sponge or cotton should be changed every second day for three or four applications; although usually there is no necessity to use any support if the pessary is sufficiently large and suited to the size of the uterine canal.

The pessary should be withdrawn in three or four weeks, in order to cleanse it of any saline crustation which may be found attached, and whenever the menses appear to be fully established, or severe lumbar or hypogastric pains occur.

I have never seen any inconvenience or danger arising from the use of the galvanic pessary, although it is probable and possible it might cause some form of metritis, if the instrument is not properly adjusted, or too long, so as to touch the fundus of the uterus. I am aware that the ordinary varieties of the intra-uterine stem pessary, which are usually employed for the different flexions of the uterus, frequently have been the cause of endometritis, etc. But the latter instrument is an inert mechanical body, while the former is a mild galvanic agent of vitalizing influence.

TEDIOUS LABORS (FROM INERTIA OF THE UTERUS).

On the 25th of March, 1872, I was called to attend Mrs. C——, aged twenty-eight years—in labor with her fourth child. She stated that her sickness commenced sixteen hours previous to my visit. Her pains were at first slow, feeble, and without any perfect uterine contractions. On examination I found the vagina freely lubricated, the uterus fully dilated, the membranes protruding unruptured, the head of the child small, presenting in the first (L. O. A.) position in the pelvic cavity. I ruptured the membranes and allowed the liquor amnii to drain in order to quicken and strengthen the pains. After waiting for nearly three hours, I found no marked advance of the head, nor a likelihood of a speedy termination of the labor; in fact there appeared no obstacle whatever to the completion of the case but uterine inertia; all that she required was a few good expulsive pains. I gave her ʒ iv. of Squibb's fluid extract of ergot, which acted in forty minutes, by slightly augmenting the frequency of the pains for more than an hour, yet without altering the position of the head. For obvious reasons I would at any time much rather apply the forceps than administer a dose of ergot; I had no alternative at the time, however, but to give her a second dose of ergot (ʒ i. pulv. secal. cornut.), which acted somewhat similar to the first, and with the same result. I had now been in attendance on the patient nearly five hours, and expected to spend as many more hours without labor being accomplished. As her pains had completely ceased for some time, I requested the permission to use the forceps and so terminate her labor, as I had done in two of her former confinements. She was at first unwilling to have me apply them until there was a recurrence of the labor pains. It was obvious that if uterine contraction could not be somehow induced, and that the ergot had been already tried, the alternative would eventually be instrumental delivery. Having procured my electro-magnetic machine, I applied the primary current in the manner which I shall presently describe, with the result of a speedy delivery of the child and placenta in less than forty minutes.

While in attendance on Mrs. C—— I was summoned to attend Mrs. H——, forty years of age, who had been in labor for twenty hours with her ninth child. I learned that her three previous confinements had been considerably protracted from want of pains. She was a healthy, robust, and well-built woman, but her pains were feeble, exhausting, and ineffectual. A vaginal examination disclosed that the membranes had ruptured and the waters had escaped. She had a large well-formed pelvis. The presentation, ascertained to be the face in the second position, partially engaged in the superior strait. I gave her ʒ i. of powdered ergot, as she objected at this time to my using electricity. The ergot acted briskly in about thirty-five minutes for nearly an hour, with only a slight advance in the position of the presentation. As the pains of labor had entirely ceased for more than an hour, having my electro-magnetic apparatus with me, I now applied the primary current in the same manner as in the former case. In a short time the effect was apparent; regular, strong and frequent expulsive pains came on; in about fifty minutes a living female infant and placenta were expelled.

I will now say a word in regard to faradization and the mode of its application in cases of labor. The primary current only should be used, as intensity is not what is desired so much as a smooth, rapidly-inter-

rupted current, applied by means of *large, well-moistened*, sponge-covered electrodes. The negative pole should be applied to the pubis, and the positive should be placed over the fundus of the uterus, gliding it gradually up and down over the body and sides of the gravid uterus. A gentle current only should be employed at first, and then gradually increased until it excites full uterine contractions, with expulsive force. The current should be employed only one-half a minute at a time, then there should be a cessation of it for a minute or more. After this cessation, the electric dose should be repeated, thus stopping and repeating it at intervals until the uterus acts with strong bearing-down pains, either with or without the continued assistance of faradization.

When I first commenced the application of electricity, the infants plunged and kicked furiously *in utero* for a few seconds; subsequently they remained quiet until their release from imprisonment.

RETAINED PLACENTA.

I was called to see a woman sixty hours after the birth of her fourth child, with a retained or adherent placenta. She had been attended by a midwife, who in her attempts to extract the placenta broke the funis close to the uterus. As she had occasionally irregular feeble uterine pains of an expulsive character, I endeavored to extract the placenta by traction on the broken portion of the cord, and by grasping the fundus of the uterus through the abdominal parietes, but failed in the attempt. I was not allowed to use the placental forceps. The neck of the uterus was considerably contracted for so short a time after the birth of the infant, so that I could not with prudence and safety to the woman introduce my hand into the uterus to remove the placenta. Faradization was employed, using the primary current, rapidly interrupted, of moderate strength, by means of Hammond's cup-shaped uterine electrode, directly to the cervix uteri with a negative connection, and the positive pole (labile) to the abdomen over the uterus with a large, well-moistened, sponge-covered electrode. After twenty minutes' application the placenta was expelled with considerable pain and force; no hemorrhage or inflammation followed. A small portion, about the size of a silver dollar, of the uterine surface of the placenta presented the appearance of recent adhesion to the uterus and of an agglutinated fibrous character. Faradization can be employed with satisfactory results in uterine hemorrhage, retained placenta from atony of the uterus, tedious labor from inertia of the womb, polyps, hydatids, etc., etc. It will be found a more convenient, safer, and a better means of exciting uterine contractions than the administration of ergot. Furthermore, it will not in any case of labor injure the infant.

AMENORRHŒA.

Emma S——, aged nineteen years, unmarried, a professional singer, lymphatic temperament, has an anxious expression of countenance. Her bowels are generally constipated, and her appetite is poor and capricious. She has a constant habit of nibbling the end of her finger-nails, especially when mentally engaged. She is fond of music, singing, dancing, and riding on horseback.

At the age of seventeen she experienced pains in her loins, thighs, and mammæ, and also a dull disagreeable sensation of pain in the left ovarian region. The irruption of the menses, which were always irregular, appearing at intervals of from three, four, and even six months, was invariably attended with a feeling of bearing-down pains in the hypogastric and uterine regions. The menstrual discharge, which lasted only for a day or two, was of a pale color and scanty in quantity. She never had any vicarious or leucorrhœal discharges, the suppression of the catamenia for the last ten months, so far as she is aware of, has been without any assignable cause. Before she came under my care, various remedies have been employed without any marked effect as regards the restoration of the monthly flow. Dr. G. Thompson sent her to me for electrical treatment. Faradization only was employed, using the primary current externally over the sacrum, uterus, and ovaries every third day for one month, without any manifestation of the menstrual discharge. On making a vaginal examination, I found the uterus small, mobile, and retroflexed. Doubtless the imperfect development of the uterus was the cause of the tardy, irregular and painful irruption of her courses. I now commenced the applications of intra-uterine faradization by applying directly to the uterus the adjustable metallic electrode with the short cervical stem attached to the positive pole, and the ovarian electrode over both the ovaries with a negative connection. I employed the secondary current at each sitting for ten minutes every second day for two weeks. As I was gaining ground rather slowly by this method, I substituted the long intra-uterine stem for the shorter one that I had been using, in order that the metal might convey the current directly through the whole length of the uterine cavity. I continued this mode of treatment daily for three weeks, using the secondary current only. In all, or about nine weeks from the time I began to treat the case by electricity, she received thirty-five applications (ten external and twenty-five intra-uterine). At the last (thirty-fifth) séance the catamenia appeared while applying the electric current; it continued to flow in a moderate quantity for three days without any of the distressing symptoms she formerly experienced, except a few slight fugitive lumbar pains. There is a remarkable feature in this case which deserves to be noticed as of some practical importance, that being of a very constipated habit of body, the bowels always became freely and agreeably relaxed several times in a few hours (two to four) after each séance, and black watery evacuations took place, which resembled those black passages that occur after the use of ferruginous preparations or the subnitrate of bismuth. Had I used the galvanic uterine pessary I have no doubt but that I would have restored the catamenia in half the time that was now employed.

AMENORRHŒA (SUPPRESSIO MENSIUM).

Mary G——, twenty-one years of age, single, sanguine temperament, and of a high florid complexion, light hair and blue eyes. During the three years previous to the present suppression of the catamenia, her monthly periods have always been very regular. The present stoppage of her courses occurred about four months ago, and has doubtless been superinduced by a cold brought on by wet feet. Chills, vomiting, and general malaise followed for a few days. For the last three months, she has had severe headaches, and several attacks of epistaxis. A copious leucorrhœal discharge has appeared at her regular expected monthly periods. After ascertaining that she was truthful and not pregnant, I used the single current adjustable intra-uterine electrode, with the long stem applied directly to the uterus, attaching the free end to the positive pole of the electro-magnetic apparatus, and closing the circuit with the ovarian electrode over both the ovaries. The secondary current was then employed as strong as could be borne, without causing pain, for ten minutes

every second day. The treatment commenced a week before the time she expected her courses. At the fourth application, while using faradization, the menstrual discharge commenced to flow, and continued to flow freely in the usual quantity, as she informed me, for five days without any interruption, and without pain or distress.

The different forms of the galvanic pessaries can be had from the Galvano-Faradic Manufacturing Co., N. Y.
239 East Tenth Street.

Progress of Medical Science.

Puncture of the Bladder.—A writer in the *Dublin Jour. of Med. Sci.* quotes the following cases as of interest in showing that the subcutaneous pneumatic aspirator of Dieulafoy can be used with safety and advantage in the treatment of retention of urine. A man falling from a scaffold a height of six or seven feet, alit astride of a beam, bruising the perinæum and anterior part of the abdomen so badly that the day after the accident a considerable extravasation of blood was found extending from the spine to the scrotum, the abdomen being sensitive to the touch and very painful; skin hot; pulse 120. A poultice sprinkled with laudanum was applied to the abdomen. In spite of frequent efforts, the patient was unable to pass urine after the accident, and the distended bladder, reached at length, to within three fingers' breadth of the umbilicus. Almost immediately after the injury about a spoonful of blood had flowed from the urethra. Catheterism having been tried without success, a prolonged warm bath was resorted to, and finally the perinæum was incised, but with no success. The necessity for relieving the distended bladder being urgent, it was punctured from above the pubes with the long No. 1 needle of the aspirator. About fourteen ounces of urine were drawn off, the needle being sunk more deeply as the bladder emptied itself. The puncture caused no pain beyond the prick of the skin. The operation was repeated several times, at intervals, and always successfully. Unfortunately the patient died of peritonitis caused by the fall. At the autopsy the outer surface of the bladder presented on its outer part little red ecchymotic spots, like flea-bites on the skin, corresponding to the sites of the puncture. On the inner surface of the bladder it was not possible to find the least trace of the passage of the needle. The urine in the bladder was perfectly normal, containing neither blood, clots, nor pus.

After various attempts during two days to catheterize an old man of sixty-five years of age, with a very large prostate and suffering from complete retention (these efforts having produced much pain and the loss of some blood), a No. 2 needle was introduced above the pubes, and seventeen ounces of urine drawn off. The relief was immediate. Two hours later a full-sized catheter was readily passed; all trouble ceased; it was unnecessary to interfere further, and the patient suffered neither any pain nor further accident from the operation.

A New Mode of Making Beef-Tea.—*New Remedies* contains the following method of making beef-tea as suggested by Dr. H. C. Wood. "In order to meet the daily-felt want of concentrated fluid meat food, a want not supplied by beef-essence, as ordinarily made, I have invented the following process, and found in practice that it works well. Take a thin rump-steak of beef, lay it upon a board, and with a case-knife scrape it. In this way a red pulp will be obtained, which contains pretty much everything in the steak, except the fibrous tissue. Mix this red pulp thoroughly with three times its bulk of cold water, stirring until the pulp is completely diffused. Put the whole upon a moderate fire and allow it to come slowly to a boil, stirring all the time to prevent the caking of the pulp. As soon as it has boiled remove from the fire, and season to taste. In using this do not allow the patient to strain it, but stir the settling thoroughly into the fluid. One to three fluid ounces of this may be given at a time."

Ether Glue.—An excellent liquid glue is made by dissolving glue in nitric ether. The ether will only dissolve a certain amount of glue, consequently the solution cannot be made too thick. The glue thus made is about the consistency of molasses and is doubly as tenacious as that made with hot water. If a few bits of india-rubber, cut into scraps the size of buck-shot be added, and the solution be allowed to stand a few days, being stirred frequently, it will be all the better and will resist dampness twice as well as glue made with water.—*Scientific American.*

Influence of Trade in Prevention of Cholera.—The attention of the French Academy has been called by M. Burcq to the immunity enjoyed by workers in copper during epidemics of cholera. Among the 800 victims of this disease in Bagdad last year, only one belonged to the trade of coppersmith.

[We have been told by the very intelligent foreman of a bronze-casting establishment in this city, that during an epidemic of cholera in Paris, where he was employed in an extensive bronze foundry, not a single instance came to his knowledge of a workman in bronze becoming affected with the disease. Their freedom from the affection was attributed not to the influence of the metals, but to the mineral acids which are so extensively used in this trade.—Ed.]

Therapeutic Action of the Various Modifications of the Galvanic Current.—An article by Dr. Leon Le Fort has appeared in recent numbers of the *Gazette Hebdomadaire*, recommending the substitution of weak continuous currents for continued strong or temporary currents in the treatment of paralysis, muscular contractions, and failures of nutrition; and gives the following summary of the relative values of the various modifications of the galvanic current as a therapeutic agent, as at present understood.

"The induced currents, such as are obtained with the apparatus of Duchenne (of Boulogne) and all the other apparatuses used in medicine, appear to be above all useful in exciting artificial movements in muscles over which the will has no control. They prevent simple atrophy, and can also prevent fatty atrophy; placing the muscles in a state of power to obey, later, the commands of the will whenever regeneration shall have taken place in the nervous elements which have become altered or destroyed. It is by this kind of fibrillar gymnastics that they influence the muscular nutrition.

"Perhaps also by the excitation which they produce they can arouse nervous action.

"But there are cases in which these contractions cannot be awakened by the induced currents while continuous currents produce them. The anatomical and physiological conditions of these phenomena are still veiled in much obscurity, but, in brief, it is understood that these currents have only a mechanical action (muscular gymnastics), being useful in the same manner as

induced currents, and should be employed in their stead, whenever induced currents are without action. In order to obtain these contractions, one is obliged to make use of currents of strong tension produced by batteries of numbers of elements, such as those employed by Remak, MM. Onimus and Legros.

"Continuous currents which are powerful have a marked action on nutrition; an action which appears to be direct and which shows itself in arresting fatty degeneration by the more rapid reproduction of anatomical elements, and by accelerating the absorption and decomposition of tissues.

"The sedative action of continuous currents, so useful in cases of neuralgia, is even more remarkable in cases of muscular contractions. Induced currents, on the other hand, are more harmful than useful. Now in cases in which it is desired to act upon nutrition—that is to say, upon continuous phenomena, incessant but slow—it appears to me that it would perhaps be advantageous to employ feeble but permanent currents. Experience has justified my predictions as regards paralysis and contractions—will it also be as happy in relation to purely nutritive phenomena? I think not. I have undertaken trials of it in cases of opacities of the crystalline lens, atrophy of the ocular membranes, and it is evident that in these cases one cannot employ strong currents.

"Scientifically, although it may be premature to establish precise indications in a subject still under study, I think I can say that in incomplete paralysis, whenever the induced current can produce muscular contractions, it is necessary to employ induced or interrupted currents.

"In incomplete paralysis, above all if it is the commencement of atrophy, and in complete paralysis in which the current only awakens contractions, it is necessary to employ continuous currents and to use a number of cells whenever it is wished to produce immediate contractions.

"But in all cases of paralysis with simple or fatty atrophy, above all in cases of atrophic reflex paralysis, or in those which are consequent upon a contusion; in all cases when it is desired to favor nutrition of the muscle, it is necessary to employ feeble currents which are permanent or continued for a long time.

"Finally, in all cases of contraction, or paralysis with contraction, feeble and permanent currents should be employed."

The simple apparatus recommended by Dr. Le Fort for the production of a feeble continuous current, and known as the Trouvé battery, consists of a common drinking-glass, at the bottom of which lies the end of a spiral of copper wire; and a wire of zinc twisted into a knot at its two extremities. One serving for the element, the other to make connection with the adjoining cell. The central wire of copper is isolated from the zinc, and from the column of liquid by a tube of rubber, or of glass, or simply by an oil-varnish. This wire supports the washer of copper which receives the oxide of zinc and prevents its being deposited at the bottom of the vessel on the copper. The glass is to be filled with ordinary water to which have been added several crystals of sulphate of copper, and the apparatus is in condition to work.

A New Method of Destroying Cilia.—Dr. Hayes contributes to the *Dublin Jour. of Med. Sci.* the notes of two cases in which cilia were removed by injecting the tincture of perchloride of iron into the tissues at their roots, causing a slough to form with the separation of which the follicles of the cilia came away. The chief points demanding attention in thus injecting the perchloride, are:—First, that the eyelid should be firmly compressed between the blades of a suitable ectropion forceps. Second, that the needle of the hypodermic syringe should be passed, and applied as closely as possible to the deep ends of the hair follicles, and lastly, that only a very small quantity of the tincture should be introduced.

This measure is only applicable to cases of limited trichiasis or districhiasis.

Transfusion.—An account is given in *The Lancet* of three cases in which transfusion of blood was performed; two successful, and one unsuccessful. In the latter, the defibrinated blood had been drawn the night before and kept fourteen hours before being used. This does not seem to have had any influence on the result of the case, which was one of exhaustion produced by gastric ulcer. The cases which were successful were those of poisoning by phosphorus and by carbonic acid. In these a quantity of blood was withdrawn, equal to that injected.

Death after Taking Chloral Hydrate.—F. Jolly (*Bayer. Aerztl. Intell.-Blatt*) states that, in the course of two years, during which he has employed the hydrate of chloral in the treatment of the insane, he had met with two cases of sudden death following its use. The dose was in each case below the average, and the chloral was chemically pure. The patients, during life, presented no contraindications to the use of the remedy. One had taken the chloral at night for four evenings in succession. On the fifth evening, after taking it, the respiration and circulation at once ceased. The necropsy showed anæmia of the brain, acute œdema of the lungs, hyperæmia of the abdominal organs, a perfectly healthy heart and vessels, and dark fluid blood. In the other case chloral had been given twelve days in succession, with the effect of producing sleep after a short stage of excitement. On the thirteenth day the patient died after some stertorous breathing, a quarter of an hour after the dose. There was here found moderate œdema of the lungs; blood was fluid, but normally distributed; the heart was large and flabby, and its muscular structure was pale, but not friable.

Marvellous Effect from the Use of Electricity in Infantile Paralysis.—In *The Lancet* of April last Dr. Barswall relates a case of paralysis occurring in an infant *four* months old, which was so far cured by the use of electricity that at the end of seven months (the child being according to this, eleven months old) the little patient was able to "*walk and run*" with a *barely perceptible* limp.

Mounting of Red Blood-Corpuscles.—At a recent meeting of the Biological and Microscopical Section of the Academy of Natural Sciences, Phila., Dr. Jos. G. Richardson remarked that some specimens of human red blood-corpuscles, which he had mounted more than six months ago in a saturated solution of acetate of potash, were still in a good state of preservation, and thought this medium, in his experience, was much more satisfactory than glycerine as a preservative agent. Dr. Hunt exhibited a convenient lamp attached to the board upon which his microscope stood, so as to allow of both being moved or even passed around a table together, without disturbing the perfection of illumination obtained for any particular object under examination.—*Phil. Med. Times.*

Memorial to Harvey.—A movement is on foot in England to cause the erection of a monumental statue in bronze to the memory of William Harvey, at Folkestone, his native place.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE MEDICAL LESSONS OF THE STOKES TRIAL.

The importance attached to the medical testimony on the trial of Stokes for the murder of Fisk has naturally enough attracted the attention of the profession to such as have been called upon to represent them upon the witness-stand. The apparent desperate character of the attack on the part of Stokes, and the straightforward evidence against the accused, forced the defence into a rather extraordinary line of argument. The plea of moral insanity was hardly sufficient to rebut the evidence for the prosecution, and the chance of proving that death was not caused directly by the wound was as eagerly seized as would be a straw by a drowning man. The responsibility of proving the point rested upon the testimony of medical witnesses. The prosecution took the ground that death was the result of the shock of the injury, while the defence maintained that the fatal issue was due to the combined effects of a large dose of morphine and injudicious probing of the abdominal wound. The examination of the medical witnesses, *pro* and *con*, proves how easy it may be for lawyers by cross-questioning, and by the detail of hypothetical cases, to make each side appear very plausible. Every advantage is taken of the difference of opinion of medical witnesses, and every attempt is made to elevate them to the dignity of scientific facts. As far as the answers of the medical experts were concerned, and as far as they bore upon questions of science, we have reason, with one or two exceptions, to congratulate ourselves in being spared the humiliation of a "confused and self-contradicting doctor on the stand."

The prudence in prescribing a dose of morphine such as is said to have been given might be questioned on many grounds and defended on as many more, but we are willing to leave the responsibility of its administration upon the gentleman having the case in charge, trusting to his individual judgment, as influenced by the condition of the patient at the time. Such judgment with an experienced practitioner is worthy of more reliance than any opinion formed upon hypothetical cases in which questions are purposely framed to bring out only certain points. It is not, however, our purpose to discuss the question whether Fisk died of shock, of an accidental over-dose of opium, or both; or, granting either of the latter, that the wound would not have caused death in any event, thus making the case one of murder pure and simple. The responsibility of deciding these points rested with the "intelligent jury," whose disagreement was a foregone conclusion.

Leaving this part of the subject for the present, at least, we pass to the consideration of some of the lessons which the trial has afforded to our profession. In the very commencement of our comments it is of course unnecessary to assert the fact that well-informed medical men always appear at an advantage in the court-room, and by their answers while there reflect credit upon their calling. The converse of this proposition was abundantly and satisfactorily proven by the deplorable exhibition of ignorance on the part of at least two gentlemen whose names had been so accidentally (?) omitted from the *Medical Register*. When we contrast the testimony of these gentlemen with that of the educated medical men, we cannot fail to express the satisfaction we feel in having the line drawn so distinctly by counsel between quackery and scientific attainments. The legal profession, despite the reputation they have for puzzling doctors, have a great respect for medical knowledge and experience, and we are pleased to record the fact that they were not backward in proclaiming such respect in open court.

It would be strange indeed if our congratulations concerning the medical aspect of this trial were not mingled with some regrets. The latter are the more positive, because they could have been so easily made unnecessary. It is to be expected that attorneys will use every effort to destroy the force of medical testimony bearing against their respective sides; but the disgraceful remarks which passed between two of the medical witnesses were not in the programme. We cannot escape the conviction that it was a very trivial excuse to vent the worst kind of professional spleen on the part of one who, by his own previous acts, has been denied the companionship of the respectable members of our brotherhood. As proofs of his unworthiness we may mention the impudent implication made by him, that the medical fraternity do not aim to cure disease, and also the unprovoked and inexcusable personal attack made upon a medical witness for the opposite side,—charging him with the theft of cases, with incompetency, etc. As a matter of principle, if not of law, it is to be deplored that the court allowed such an exhibition of personal animosity, and compelled itself to listen to a defence not a

whit less personal and unprofessional. The general result of this individual tilt has been a good deal of comment by the secular press on quarrelling doctors. As is always the case, our profession is held up to ridicule and its members are stigmatized as jealous, unmanly, and wanting in the ordinary rules of courtesy. What else can we expect when such scenes as those which have transpired in this memorable trial give such tempting opportunities for criticism? We were sorry to see that the party attacked thought it necessary to reply, and deemed it of importance to his general professional character not only to be questioned in open court concerning the number of pamphlets he had written, where he had lectured, and what foreign decorations he had received, but to give evidence, by a purely voluntary insinuation, of a spirit of retaliation so unbecoming the dignity of a medical gentleman.

In the course of the trial a great deal has been said of the evil effects of probing gunshot wounds, but in our opinion not one word has been spoken too strongly against it. Although it could not be proved that the probing hastened death in this case, there is no particular credit due to those gentlemen for their efforts to render such a relation between cause and effect impossible. We do not doubt that the probe in such cases is not unfrequently more dangerous than the bullet itself. Generally speaking, whenever a person has been shot, the first thing that some surgeons deem of importance is to search for the ball, no matter what part of the body it may have entered. The probe is thrust into the track of the wound, no matter how deep, and the examination is carried on with a disregard for subsequent internal inflammations and internal hemorrhages that is truly astonishing. Some of these gentlemen seem determined that the patient shall not even die until the ball is found, and if possible extracted. If the patient is so unfortunate as to have a number of surgeons present, so much the worse for him, as each of the said surgeons is very apt to yield to the temptation of probing, and what was in the beginning a trivial case becomes not unfrequently in the end a very critical if not fatal one. In the vast majority of cases of gunshot wounds of cavities the great mischief is done when the ball enters, and its extraction under the most favorable circumstances is rarely if ever unattended with positive danger. With many surgeons the finding of a ball is taken as an evidence of extraordinary sagacity, and its prompt extraction a proof, to the public at least, of extraordinary skill. That they are mistaken in this regard the records of the Stokes trial abundantly prove. Let us hope that the lucky escape of those gentlemen who thought their whole business was to probe until they found the missile, may be a lasting lesson to others who may be tempted to follow their practice and make themselves, some time or other, accessories to a murder.

We believe this trial will give both the medical and legal professions a practical lesson in medical jurisprudence. The results of the examination of Dr. McCready, the manager of the medical line of evidence for the defence, prove the necessity of keeping such gentlemen from the witness-stand. There must always be a liability, as in this case, of a cross-examination to prove that the medical man in question not only furnishes the line of medical argument, but the very questions that are to be asked bearing upon the same. In a scientific point of view this is eminently proper, but when the facts are brought prominently before a jury it is not calculated to create a favorable impression for the particular side he may represent.

WEST POINT MILITARY ACADEMY — BOARD OF VISITORS' REPORT.

The Board of Visitors to the United States Military Academy (West Point) for 1872 have made their report to the Secretary of War, and we are pleased to notice the number of timely suggestions for the improvement of the physical as well as mental condition of the cadets it contains. It is recommended that the time for sleep be increased so that eight continuous hours be given to it during the night; that breakfast be called as soon as practicable after rising; that the ordinary recitations, which occupy an hour and a half, should not exceed three-quarters of an hour; that the mess-table be improved by a more skilful cook, a better class of waiters, and that there be a liberal addition of milk, which as an article of diet is recommended as a partial substitute for coffee. All these proposed changes are eminently judicious, and are founded upon the principles of the advanced sanitary science of the day. It is to be hoped that these and other suggestions bearing upon the welfare of the cadets will be seriously considered by the War Department.

THE CROTON SUPPLY.

From the report of the Commissioner of Public Works we have the assurance that the Croton Aqueduct is in a good and sound condition, and "that with proper care it will perform for centuries to come the duties for which it was built." As the population of the city increases, however, there will be developed a need for storage reservoirs, sites for which have already been selected. The waste of water in private dwellings must of course be a drawback to all calculations for the future, and until the Department by persuasion or threats can prevent it, an abundant supply in cases of drought can never be guaranteed.

THE CHOLERA IN THE EAST.

The spread of cholera in the East is of course ominous, and gives rise to the usual anxiety as to its appearance upon our coasts, but as far as we have yet learned there is no cause for any unnecessary alarm.

Reviews and Notices of Books.

Clinical Lectures on the Diseases of Women. By Sir James Y. Simpson, Bart., M.D., D.C.L., late Professor of Midwifery in the University of Edinburgh. Edited by Alexander R. Simpson, M.D., Professor of Medicine and Midwifery and Diseases of Children in the University of Edinburgh. New York: D. Appleton & Co., 1872.

This is Vol. III. of a new and elegant edition of the complete works of that brilliant and comprehensive scholar, teacher, and physician, whose death we mourned little more than a year ago. It is doubtful whether death could have found any more shining mark in our profession. No other British name in medicine was more honored or more quoted. More voluminous than any other author in this department of the profession, his various works had come to us from time to time, fresh with the glow of recent and original observations. His style of writing is always pure, lucid, and continuous. He is read rapidly and without fatigue, and does not fail to convey to every reader a clear and harmonious view of the subject presented. And when his lectures first came to us in the journals, how full of new ideas well stated they were, introducing to us chloroform, bimanual exploration of the uterus, the use of the metrotome, diagnosis under anæsthesia, the sponge-tent, etc.

It is safe to say that the profession owe more to him than to any other man of modern times in gynæcological studies. This posthumous monument is due to and worthy of his living fame. The lectures contained in the present volume were first published at intervals from 1856 to 1866, and some of them were revised by the author as recently as 1868. We read them with interest to see how generally the views then enunciated have been fortified, developed, and illustrated in the progress of science. While there have been important additions made, very little here set forth has become antiquated, and in most subjects the luminous and symmetrical statements here given show practical doctrines as fairly and fully as most later works. Notably is this true with regard to the chapters on Pelvic Peritonitis and Cellulitis, Hæmatocele, and Cancroid Growths. The chapter on Surgical Fever is of the highest value, but could now be extended by a discussion of the value of antiseptics and quinine in checking disorganization of the corpuscular elements of the blood.

The chapter on Spurious Pregnancy, if not unique, is the best of its kind in modern literature. The general discussion of cystic disease of the ovary and tubes, the etiology and diagnosis, is equally good. Little has been added in this direction as yet, though something is believed to be prepared for us in the spectroscopic studies of Dr. Peaslee.

The operation for ovariotomy is not so fully treated as might be desired in a text-book. But it is not proper to consider this a text-book. These are clinical lectures, dictated by cases under observation, and no attempt is made to reach the completeness of a systematic treatise. In the chapter on Puerperal Mania we miss allusion to the great value of chloral. It was introduced to our notice not long before Dr. Simpson's death, and, we are told, was received and employed with great enthusiasm by him. Perhaps the greatest value as well as charm in these papers comes from the fact that the author approaches his particular subjects from the high plane of a complete professional and general education. Thus his lectures have an abundance of illustration, a weight and a worth to which the upward-working specialist hardly may attain.

Archives of Ophthalmology and Otology. Vol. II. No. 2. Edited by Prof. H. Knapp, M.D., New York; and S. Moos, M.D., Heidelberg. W. Wood & Co. 1872.

The second number of the second volume of this handsome journal is before us; and it is gratifying to find in it a goodly amount of solid matter which will endure as permanent contributions to knowledge in ophthalmic and aural science,—a large proportion of the articles being the embodiment of observations and experiments on points of physiology and pathology. The several papers composing the number are as follows: (1.) *Anomalous Circulation in the Eye.* By E. G. Loring, M.D., of New York. The author describes two cases where the ophthalmoscope showed an apparent anastomosis between a retinal and a choroidal vein, and one of similar arterial anastomosis. In all three cases the anomaly was evidently a result of morbid processes in the fundus. (2.) *Clinical and Anatomical Observations.* By Dr. J. Hirschberg, of Berlin. These observations embrace descriptions of a case each of cysticercus intraocularis, sarcoma of the lower eyelid, and glioma of the retina in the first stage. In the first case the diagnosis of cysticercus was made by exclusion before enucleation, although the parasite itself was completely hidden from view by the opacity of the shrunken vitreous covering it. The site of the parasite was in the vitreous chamber, its nest lying upon the inner surface of a fold of detached retina. In the case of sarcoma of the lower eyelid—a most unusual affection—the tumor, of the size of an apple, was removed together with the eyeball to which it was adherent, and the patient "discharged cured" nineteen days later. The growth on microscopical examination proved to be a small-celled sarcoma. The special interest of the case of glioma was, that enucleation was done while the growth was in the first stage, entirely confined to the retina, and that three years later the patient showed no signs of a relapse. In other papers (3 and 5), the same author gives an anatomical description of the appearances in two other eyes affected with the same disease, retinal glioma, and in another contribution (4) details a case where engorged optic papillæ were observed in connection with a solitary tubercle of the cerebellum as big as an apple. (6.) *Living Larvæ in the Human Ear.* By Dr. Clarence J. Blake, of Boston. The author describes the symptoms of the presence of larvæ in the ear, and gives an account of the natural history of the two varieties of larvæ found in that locality. (7.) *An Investigation Concerning the Mechanism of the Ossicles of Hearing and the Membrane of the Round Window.* By Charles H. Burnett, M.D., of Philadelphia. This paper gives the result of experiments made by the author, at the suggestion and with the aid of Prof. Helmholtz, on the vibration of the membrane of the round window as produced by the action of the ossicles of the ear, and as affected by variation in the pressure of the fluid of the labyrinth. Fresh temporal bones from the human subject were dissected so as to expose to view the chain of bones and the membrane of the fenestra rotunda, and the vibratory excursions of these structures under the different circumstances of the experiments were measured under the microscope and compared. The experiments consisted in conducting sound waves of different pitch into the external auditory canal, and in artificially varying the pressure of the labyrinthal fluid. (8.) Dr. Oscar Wolf, of Frankfort-on-the-Main, details a case of *Gunshot Wound of*

the Face, the ball entering the right cheek and lodging so as to totally occlude the left Eustachian tube. Profuse hemorrhages occurring from the nose, the right common carotid artery was successfully tied. Deafness and subjective sensations of sound in the left ear were temporarily relieved by paracentesis of the membrana tympani twice performed. The author alludes to the absence of any grave symptoms following the tying of the carotid, and discusses the effect of variation in the intra-aural pressure in modifying the pitch of conducted sounds, and in producing subjective sensations of sound. (9.) Dr. Roosa, of New York, gives a careful analysis of *Sixteen Cases of Aural Disease caused by the use of the Nasal Douche*, with the conclusion that even when the douche is carefully used, with all the proper precautions by intelligent patients duly taught by competent instructors, accidental entrance of fluid into the middle ear may occur, causing more or less severe aural disease. He therefore condemns the use of the apparatus as dangerous. (10.) *Contributions to Ophthalmo-tonometry.* By Dr. E. Pflüger, of Bern. This elaborate and interesting paper embraces the results of a great number of observations on intra-ocular pressure as determined by the tonometer. The author carefully describes the sources of error in the use of the instrument, and then proceeds to discuss the subject of the effect on intra-ocular pressure of age, atropine, iridectomy, and various pathological conditions of the eye. (11.) *Notes on Ophthalmological and Otological Subjects, made during a Journey through Europe.* By H. Knapp. These notes of travel give succinctly special modes of practice adopted by many of the leading ophthalmic and aural surgeons of Great Britain, France, and Germany, as observed by the author, and also a report on the transactions of the German Ophthalmological Society at the session last September, from the author's own stenographic notes. (12.) Dr. Alexander Pagenstecher, of Wiesbaden, details an interesting case of *Tearstone in the Canaliculus lachrymalis Inferior.* The stone was 6 mm. long by 3 mm. wide, and its presence caused epiphora and great catarrhal conjunctivitis, with blepharitis. All the symptoms disappeared upon its removal. (13.) Dr. L. von Wecker, of Paris, describes his method of *Tattooing the Cornea* in cases of leucoma, and states that this procedure is easily done, nearly painless, and, besides, the cosmetic effect may often be used to improve sight by stopping out the diffused light that enters the eye through a semi-transparent leucoma. (14.) *The Galvanic Treatment of Diseases of the Eye and Ear.* By Prof. W. Erb, M.D., of Heidelberg. The gist of this long paper is not so much the therapeusis of galvanism as a warm controversial discussion of some physiological questions suggested by phenomena experienced in the sense of hearing during the employment of electricity. (15.) Mr. William Hack, of Heidelberg, gives an anatomical description of the appearances in a case of *Hyperostosis of both Petrous Bones: Bony closure of the left round window, of the right upper, and the left upper and posterior semicircular canals.* This paper, by the way, is omitted in the table of contents. (16.) Prof. Theo. Saemisch, of Bonn, details a very interesting and unique case of *Fibroma of the Sclerotic.* The tumor, 10 mm. long, 8 mm. wide, and 5 mm. thick, was upon the outer surface of the sclera, intimately connected with it; but being situated behind the equator, was invisible with the globe *in situ.* The ophthalmoscopic picture and clinical history were those of glioma, and the diagnosis of glioma was made and enucleation performed with that view of the case.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, June 20, 1872.

Dr. E. R. Peaslee, President, in the Chair.

The President announced the receipt of the June number of the *Edinburgh Medical Journal.*

Allusion was also made to the good opinion entertained abroad of the Academy; the favorable notice by the *London Doctor* of those members who took part in the interesting discussion on Diabetes mellitus, being one of the evidences.

Dr. Roberts stated that the "Fasciculus" of the Academy would be published within a fortnight.

THE CURRENT MATERIA MEDICA.

Dr. E. R. Squibb then made the following remarks on "The Current Materia Medica":—

Materia medica should be thoroughly studied in connection with therapeutics, and the student should never be suffered to graduate without paying particular attention to this branch of the curriculum. There is a tendency among some to almost ignore the materia medica, which is all wrong; it should be studied up to the times. Take, for instance, *hydrate of chloral*, which was first fully investigated and then applied to practical use. Persons are apt to use a remedy and extol it in medical text-books and journals without giving it a fair trial, thus creating a fashion in medicine. True progress is entirely different from fashion in medicine. In regard to the subject of *anæsthetics* and the mortality from their use, he has not, in the course of his extensive reading of home and foreign journals, seen a case of death in this country, and only two or three abroad during the year. This is accounted for by the little use of chloroform, and the predominance of ether; and the day is coming when the former will be confined only to the branch to which it belongs—the obstetrical.

Bromide of potassium is more within the control of the profession than it was, and has taken its proper place in the materia medica. Many times it is given in too small doses and no good effect is produced. The doses should be large enough to get up bromism; sometimes fifteen or twenty grains will do it, but in his experience forty, fifty, or sixty grain doses are called for; as a hypnotic, twenty-five-grain doses are essential.

He recollected a remark of Prof. Van Buren, that in order to get iodinism he gave iodide of potassium in sufficient doses; as high sometimes as one-ounce doses. The same rule is applicable to the administration of bromide of potassium.

Alkaloids, or active principle of drugs. No one expects to get from the salts of morphia that relief as from pure opium itself—although one grain of morphia equals six grains of opium. He believes that good opium will be the standard of the profession after all. The chemical processes in use for abstracting the alkaloids deteriorate the anodyne properties, and are destructive to the anodynes of our fathers. If practitioners were better satisfied to use the pure original anodynes, without being tortured, the results would be more satisfactory. It has been a great fashion to have fine-looking white alkaloids, which are made at the expense of medicinal qualities; for every time they are bleached by the chemist a portion of the valuable property is lost.

Another subject of importance is the *dietary of the*

sick. The various extracts of meat sold at the stores are of little value; there is not one of them, which is advertised, which will bear out the remark of Dr. Christison, "they arrest waste, but do not keep up the supply." His impression is, that there is not as much against the use of solid food or aliment in disease as has been said against it. The stomach is not a chemical laboratory, or "a kitchen for cooking food," as Abernethy wisely remarked. Food should not be subjected to the ordeal of chemists, as the fashion is.

Among the articles that have been introduced in the dietary department, and has taken a firm stand in the materia medica, is *pepsine.* Generally, however, patients have been in the habit of taking starch rather than pepsine. Once get up a reputation concerning a certain variety of this agent, the manufacturer has a good start for making money. Some specimens examined were good and others were bad. The name of the maker is no guarantee, as it may be good at one time and poor at another. While the proprietor is looking after the money column, the manufacture is entrusted to another. The fresh supply of pigs' stomachs must come from the western pork-markets.

The pancreatic emulsions and preparations of bismuth and pepsine, so fashionable now, cannot be recommended: bismuth and pepsine cannot exist together. Those fashionable mixtures of beef and iron—as Vinum cibi, Vinum cibi et ferri cum cinchona, etc.—are gross frauds; only money is in them. Hardly any cod-liver oil will pass muster except it is tasteless; and his impression is that many of these preparations are not cod-liver oil at all, only oil made up for the market. Good oils should neither be too dark nor too light, but of a medium color. The dark varieties are made of livers in a state of decomposition. There are good cod-liver oils in market which come from Norway and Newfoundland. The reason that the Norwegian oil is less rancid than others is, because it is never made at a less temperature than fifty degrees; consequently decomposition is avoided. Oil, when in use, should be kept in a cool place, as a refrigerator, and after each dose is given the glass should be thoroughly washed. Small pieces of ice put in the doses of disagreeable substances, like cod-liver oil, renders the agent almost tasteless. Those physicians who eschew the fashionable remedies take to the syrups, such as Aiken's syrup, etc. The lacto-phosphate of iron is based on fallacies like the others; but it is very taking, and is advocated by Hosford and others. Physicians are anxious to get solutions of phosphorus into the stomach, but before it gets there it becomes oxidized.

Another popular fallacy of the day is the use of sugar-coated pills or medical confectionery. Coroners have found these pills, after death, in the stomach and intestines, undissolved. Medicines should be given in such a shape that they will be quickly dissolved. It is not an easy matter to get the hard coat off the pills. Glycerine should be used in compounding pills, to render them soft. Pills made in this way are easily dissolved in the stomach. He has been astonished that Blancard's pill has been so useful as has been stated—it being covered with a metallic coat.

Medicines in capsules are not to be advocated—they being not easily dissolved.

The use of various forms of divided medicines, particularly "The Divided Medicine Co.'s" preparations, is another fallacy. It is nothing new, but an old way of preparing medicines. This way of dosing might be good if the physician would put the medicine up, but to purchase these preparations of companies is dangerous pharmacy.

Rhubarb in squares, covered with powder, is not desirable. Physicians should get the Chinese rhubarb, in solid state, and then they know what it is.

Disinfectants, like chloralum or chloride of aluminium, are fashionable agents. The sulphate of aluminium is better than the latter, but it is old; so, to popularize it, Prof. Gamgee took the chloride. To improve it in this country we have taken the name of bromo-chloralum. Wastes of chemical manufactures are to be the source of disinfectants for health-boards. Copperas, or sulphate of iron, and carbolic acid are all that can be desired.

Cinchona barks from India will probably give us all that can be dispensed. Moss planted on the bark improves the quality—called mossine in that country.

Chloral received, about a year ago, a decided check on account of the number of deaths reported from its use; it is a potent agent, and has taken a very proper place in the materia medica.

Cundurango, which received its aid from the State Department at Washington, D. C., has pretty much gone out. That department deserves the reprobation of the physicians of this country. Reports have come back to the discredit of its use.

Nitrite of amyl, introduced by the foreign physicians, and first written about by Dr. Richardson, of London, is a useful remedy. Cases of hemicrania, spasmodic asthma, etc., have been relieved by its inhalation. It is supposed to paralyze the nervous system of the arterioles; from sixty-five to seventy beats may be added in a few seconds by its use. The circulation resumes its usual tone in a few minutes, and the effect of the remedy passes off.

Xylol has now degenerated into a prevention of small-pox, and it is very hard to place a value upon it.

An article which has been recently introduced from Germany—*Rhamnus frangula*—seems to stand between rhubarb and senna, and is useful in constipation. The tincture has been prepared at the instance of Dr. Gray, of Utica, and is a good preparation; but it is better chewed; a few pieces chewed during the day will overcome constipation.

Dr. Gouverneur M. Smith remarked as follows upon "Lactic acid as a cause of disease when employed as a remedial agent."

As relevant, Mr. President, to the subject which Dr. Squibb has so ably presented to the Academy this evening, I will simply offer a few thoughts in relation to a principle which is interesting to the medical profession, on account of the various aspects which it exhibits for our study. Reference is made to the principle known as *lactic acid.* The physiologist regards it as being one of the component parts of several of the normal secretions; the pathologist views it as the *materies morbi* in a so-called diathesis; while the therapeutist receives it from the hands of the pharmacist to employ either *per se*, or in the form of a saline in the relief of disease. It is peculiar in the fact that it is elaborated both in the animal and in the vegetable kingdoms, and can be readily artificially produced.

In the animal kingdom, lactic acid is found occurring as an ingredient of the gastric juice in the proportion of 4.78 in 1000 parts; associated with soda, potassa, and lime, it is detected in the urine in proportions varying from 1.50 to 2.60 in 1000, while the same alkaline lactates appear in the sweat in the ratio of about .317 in 1000. Liebig and Robin affirm that the lactates are to be found and are produced in the muscular tissue. In the vegetable kingdom, Wittstein has observed lactic acid in the solanum dulcamara, and in the fresh sap of the grape-vine. It is unnecessary to allude to the methods of artificially preparing this principle. To

Scheele has been attributed the honor of having first isolated this organic acid.

The dose of lactic acid as directed in the U. S. D. is from ℥ j. to ℥ iij. *per diem*, and, as a remedy, has been recommended by Magendie and Handfield Jones in certain forms of dyspepsia and in disorders accompanied by phosphatic deposits in the urine. The salts of lactic acid, as is well known, vary in dose according to the base associated with the acid, and are prescribed at the present time in maladies of very diverse character.

In studying the therapeutical properties of medicinal substances we are naturally led to inquire if the drugs in question possess any toxicological qualities. Now it is with the view of determining whether or not the exhibition either of lactic acid or of its salts is ever attended with disagreeable *sequelæ*, that these thoughts are offered to this Academy, in the hope of eliciting the experience of its Fellows upon this subject. It may not be inappropriate to state the reasons which have recently more particularly called my attention to this inquiry. An article appeared in the *British Medical Journal* of Dec. 23d, 1871, from the pen of Balthazer W. Foster, M.D., Prof. of Medicine in Queen's College, Birmingham, etc., entitled "The Synthesis of Acute Rheumatism." This paper, in the form of a reprint, was a short time ago sent to me by the author, and a few of the interesting statements therein contained are herewith presented as worthy of consideration.

Dr. Foster states that he "was engaged in completing an inquiry into the effects of different drugs on the sugar excretion in *diabetes*," and was led to observe the action of lactic acid. The first patient in whom he specially noted the behavior of the medicine was a man aged 31 years, who had suffered several months from meliturin, and who, on admission to the General Hospital, was passing 180 ounces of urine *per diem*, containing 49 grains of sugar to the ounce. After treatment for two months on a restricted diet, the urine was diminished in quantity to 116 ounces *per diem*, containing but 36 grains of sugar per ounce. The patient was now placed under the influence of lactic acid, fifteen minims at a dose, four times a day, the dose being doubled on the morning of the second day. Before the expiration of forty-eight hours the patient complained of acute pains in the joints, and the medicine was discontinued. As this symptom was regarded as a mere coincidence, the patient, on recovering from the arthritic difficulty, was again placed under the influence of lactic acid. A repetition of the pains was the result, an increased general temperature, while a number of joints presented the appearance of typical specimens of rheumatic arthritis. The medicine was again stopped, and a subsidence of the inflammatory condition was again immediately noticed. During the use of the lactic acid there appeared to be an improvement in the diabetic symptoms, and the patient was placed under a further trial of the drug. It soon became manifest that small doses of the remedy could be tolerated; but if these were increased, rheumatic symptoms would immediately be developed.

While this patient was under treatment, another one presented himself at the hospital, likewise suffering with *diabetes*, who on being placed under the influence of lactic acid, was on the fourth day attacked with symptoms of rheumatism. The acid mixture was discontinued, and in two days the patient was relieved of his arthritic complication.

Dr. Foster, in his concluding remarks, says: "In the first case, at least six well-marked arthritic attacks occurred; in the second case, under conditions less favorable for observation as to duration of treatment and place, one well-marked attack occurred. The phenomena corresponded in all respects to those which are characteristic of acute articular rheumatism. They came on when the acid was taken, and ceased when it was discontinued. When moderate quantities of the acid were tolerated, an increase in the dose was succeeded by the painful inflammation of the joints. Coinciding with the development of the articular affection was the appearance of perspiration, at first only slight, but afterwards, in the more severe attacks, copious and acid. These facts have dispelled the last lingering doubt in my mind as to the truth of the lactic-acid theory of rheumatism." Dr. Foster further says: "In health, no doubt, much larger quantities of lactic acid than any given in my cases would be excreted without producing any perceptible disturbance in the bodily functions. The acid would escape by the skin, the kidneys, or after oxidation, as carbonic acid and water. It cannot be justly argued that the quantities of acid taken by my patients were too small not to have escaped in this way. The conditions under which the drug was given must be borne in mind. In diabetes we have a state of suboxidation very unfavorable to the conversion by oxidation of new compounds; and in Wright's case this was aggravated by the serious pulmonary complications. Associated with these, there was a dry and brawny state of the skin, highly unfavorable to the elimination of the lactic acid by one of the common channels. Lastly, the well-known persistent acidity of the urine in diabetes points to a pre-existing hyperacidity of the fluids."

These observations of Dr. Foster are exceedingly interesting, as tending to show the correctness of the theory attributing arthritis to a lactic-acid diathesis, as so strongly contended by Fuller a few years since, and also as tending to exhibit that lactic acid, as artificially supplied to the system, may induce mischief. No one who has examined the recent literature on the subject of rheumatism can have failed to have had his faith somewhat shaken in the theory to which allusion has just been made. Clinical study of acute articular rheumatism in dispensary, hospital, and private practice has, however, led me to give a preference to the alkaline treatment, and an inclination to the belief in an acid *materies morbi* in the disorder in question. While the different methods of treatment which have of late been advocated for the relief of rheumatism may be as efficient as that known as the alkaline method, nevertheless such success does not prove that the etiological views of Fuller and of others of like mind are incorrect.

For example, in the London Hospital Reports we read of the treatment of rheumatic fever by free blistering, as recommended by Herbert Davies, in which either arm-lets, wrist-lets, thigh-lets, leg-lets, and finger-lets of blistering plaster were applied "near to, but not upon every *joint inflamed*, at the very *height* of the inflammatory stage, when the local pains were the most severe and the constitutional disturbance the *greatest*," or in which strong acetum lyttæ was painted in zones round the joints. Now the chief design of such treatment was to induce an elimination of a *materies morbi* from the blood through serous discharges, and was not with the intent of exciting a mere sanguineous derivation. Furthermore, Dr. Davies advocates a mild alkaline treatment as a useful adjunct to the means just alluded to.

In Guy's Hospital Reports G. Owen Rees reports cases of rheumatic fever successfully treated by lemon juice. In such instances we can readily suppose that the alkalies naturally associated with the citric acid were as efficient in correcting an acid diathesis, as are the alkalies when administered either in the form of

Rochelle salts or when given in other saline forms as artificially prepared.

Again, in Guy's Hospital Reports there are recorded a number of cases of acute rheumatism occurring in the practice of Drs. Gull, Sutton, and Rees, which made favorable recoveries under a simple mint-water or an expectant treatment. We learn from such facts that patients when placed under favorable hygienic conditions will as readily recuperate from acute rheumatism as they will, as is well known, from many other disorders, and convalesce more rapidly than if they had been subjected to meddlesome medication.

These apparently diverse plans of treatment subserve to a certain extent a similar purpose, being, as has been said, either eliminative of, or chemically antagonistic to some inimical principle. As there has been a pretty general belief that the *materies morbi* of rheumatism was *lactic acid*, we have, in the interesting cases narrated by Dr. Foster, such strong corroborative facts as to warrant us in confirming our faith in such supposition.

A question of practical importance here arises, viz., to what extent can we employ either lactic acid or its salts as therapeutical agents without inducing mischief? It is not probable that these articles, if exhibited in ordinary doses during health, would produce any very serious disturbance; Nature is so conservative in her action that such a chemical disposition of them would be made in the economy as to render their resultants innocuous. Nor is it probable that in every form of disease they are capable of exciting any more trouble than they could if administered under normal circumstances; in some disorders, indeed, when wisely administered they appear remedial in their action. Though this is true, are there not morbid conditions contraindicating their employment? In some maladies the processes of vital chemistry are so disturbed that nearly all the functions are disarranged; now under such circumstances a small additional quantity of lactic acid may prove as toxicological as much larger quantities if taken under normal circumstances.

The salts of lactic acid are now very freely employed, and in disorders very diverse in their nature. Are there not morbid conditions which may contraindicate their exhibition if given either in large doses or in small quantities frequently repeated and extending over a considerable space of time? For example, if an individual has inherited or has acquired a rheumatic diathesis, is it proper to administer to such a person the agents in question? If there is an apparent idiosyncrasy, inimical to lactic acid, is it not more desirable, when treating patients possessing such peculiarity, for any malady whatsoever, to administer remedies not containing the acid under consideration? If lactic acid artificially administered can excite acute inflammatory action in the fibrous structures of the joints, it is equally liable to induce mischief in the kindred structures of the heart and pericardium. Arthritic inflammation may subside, leaving no permanent trouble in the joints; but if inflammation is once excited in the delicate cardiac membranes, persistent disaster may be the consequence.

There may be other morbid conditions in which the exhibition of lactic acid is contraindicated, as may occur in those suffering from embarrassed respiration, or in those in whom the functions of the kidneys and skin are seriously impaired. Lactic acid, as the natural product of the system may even under such circumstances be eliminated either *per se* or as broken into derivatives; if, however, a slight surplus is artificially supplied, the latter may immediately assume the character of a *materies morbi*, while in health such addition would be readily tolerated. Unfavorable symptoms by a superficial observer may be regarded as coincidences, their true import remaining uninterpreted.

It is foreign to my purpose to convey the impression that lactic acid, as ordinarily employed, is inimical to the system; for Nature is so conservative in her action as to antagonize small quantities of materials decidedly poisonous in their character; but the facts noted by Dr. Foster are worthy of our attention, and have excited the inquiries which have been thus briefly set forth.

Dr. Van Kleeck inquired of the first speaker if the rhamnus catharticus, or buckthorn, was the same article mentioned by him, viz., *rhamnus frangula*.

Dr. Squibb replied that it was of the same genus, but milder in character.

To the following queries of Dr. Van Kleeck: Whether chloral was apt to become decomposed when exhibited in syrup; whether bromide of sodium was superior to the bromide of potassium as a medicinal agent; and whether the combination of dilute phosphoric acid and the hypophosphites was chemically proper—he having found the latter mixture very useful in his practice, Dr. Squibb answered that chloral should be given in a solution of water; it should not be suspended in syrup, as decomposition was apt to occur. Ice and water was a good vehicle for giving the salines.

In regard to the use of bromide of sodium, enough had not as yet been used to enable one to form an opinion concerning its merits. We have not data enough to change from bromide of potassium to bromide of sodium. In those cases where acne was produced by doses of the former, it would be wise to substitute bromide of sodium.

The phosphoric acid mixture alluded to was not a bad chemical combination. Delatour, of Wall street, several years ago, conceiving that a pleasant medicinal drink would be popular with an enervated class of customers, and also beneficial, consulted him concerning a formula. The result was the manufacture of a phosphoric lemonade, which was extremely popular and useful to the Wall street gamblers, and that class who were worn out in body and mind. Many times they came in exhausted, and after partaking of a glass of this brain restorer were enabled to go on with the business of the day with comparative ease. Dr. Gray has said that a tumbler of phosphoric lemonade was useful to him.

On motion, the Academy adjourned to Sept. 5th.

THE AMERICAN OTOLOGICAL SOCIETY.

The Fifth Annual Meeting of the Society was held at the Ocean House, Newport, R. I., July 17th, 1872, at 11¼ o'clock.

Present: Drs. W. W. Morland, of Boston; Frank W. Abbott, of Buffalo, N. Y.; C. J. Blake, of Boston; O. D. Pomeroy, of New York; Henry L. Shaw, of Boston, and J. Orne Green, of Boston.

In the absence of the President, Dr. Morland was chosen Chairman.

Drs. Morland, Blake, Pomeroy, Abbott, and Shaw were appointed a committee on the nomination of new members, and reported the names of Drs. J. Solis Cohen, of Philadelphia; Chas. H. Burnett, of Philadelphia, and George Strawbridge, of Philadelphia, all of whom were duly elected, and Drs. Cohen and Burnett took their seats as members.

The Chair appointed Drs. Pomeroy, Abbott, and Shaw as the Executive Committee.

The Treasurer's report was read and referred to Dr. Blake as an Auditing Committee, who reported it correct, and it was accepted.

Notice was given of a proposed amendment to the By-Laws, substituting three instead of five as the number of the Committee on Nominations.

The following bulletin of business was submitted by the Executive Committee, and the papers read in order, and referred to the Publishing Committee:—

Report on the Progress of Otology. By C. J. Blake, M.D., of Boston.

Accidental Evulsion of the Membrana Tympani and Ossicles. By Chas. H. Burnett, M.D., of Philadelphia.

Clinical Contributions: Otitis Media Hemorrhagica. By D. B. St. J. Roosa, M.D., of New York.

A Peculiar Case of Impacted Cerumen. By D. B. St. J. Roosa, M.D., of New York.

Examination of 100 Cases of Impacted Cerumen, with a view of determining its pathological indication. By O. D. Pomeroy, M.D., of New York.

A Case Presenting a Mastoid Sequestrum. By O. D. Pomeroy, M.D., of New York.

A Faucial Eustachian Catheter. By O. D. Pomeroy, M.D., of New York.

The Perception of High Musical Notes. By C. J. Blake, M.D., of Boston.

Case of Caries of the Meatus. By C. J. Blake, M.D., of Boston.

A Middle-Ear Mirror. By C. J. Blake, M.D., of Boston.

Verbal Communications.—Remarks on a late publication, in which corpulence is considered a cause of deafness. By W. W. Morland, M.D., of Boston.

Cases of injury to the ear from external violence. Six of injury from explosions. Three of injury from blows. Two of injury from attempted removal of foreign bodies. By J. Orne Green, M.D., of Boston.

A vote of thanks was passed Dr. Blake for the very interesting and laborious report presented by him on the Progress of Otology.

Notice was given of a proposed amendment to the By-Laws, viz.: to insert at the end of the first paragraph of the fourth section these words, "and any member neglecting to pay the annual assessments for three years shall be considered to have forfeited his membership."

At 2¾ o'clock, after the reading of the ninth paper, the Society adjourned till 4½ o'clock P.M.

SECOND SESSION.

The Chairman called the Society to order at 4½ o'clock, and the minutes of the first session were read and approved.

The Executive Committee presented the following list of officers for the ensuing year, all of whom were elected:—President, Henry D. Noyes, M.D.; Vice-President, E. L. Holmes, M.D.; Secretary and Treasurer, J. Orne Green, M.D.; Publishing Committee, R. F. Weir, M.D., Chas. E. Hackley, M.D.; Committee on Progress of Otology, C. H. Burnett, M.D.

Dr. Cohen gave notice of an addition to the By-Laws, providing that a delegate should be chosen annually to the American Medical Association. The two amendments to the By-Laws proposed at the first session were adopted. It was voted that all papers referred to the Publishing Committee be sent to them before October 1st, and that proofs of articles be sent to their authors, returnable within one week from the date of their receipt, in default of which return, the paper to be left out of the Transactions at the discretion of the Committee.

It was also voted that when the Society adjourn, it should meet again at the call of the Secretary, on the day preceding the annual meeting of the American Ophthalmological Society.

The minutes of this session were read and approved, and the Society adjourned at 6¼ P.M.

Correspondence.

THE EXTRAORDINARY MORTALITY OF NEW YORK.

BUREAU OF RECORDS OF VITAL STATISTICS,
HEALTH DEPARTMENT, July 22, 1872.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—The extraordinary mortality of the week ending July 6th, 1872, is worthy of special notice, and I beg to present to your readers its most prominent features. Its *actual* mortality reached the enormous figure of 1,591;—229 more deaths than had ever before been *registered* during any single week in this city, the next largest number having been 1,362 in the week ending July 21st, 1866, when Asiatic cholera had been prevailing here for some time. The maximum mortality of the year (that of the present year being most probably represented by the week in question) had never before occurred so early in the season. It will suffice to go back as far as 1855 to corroborate this fact. From that time during ten successive years the greatest weekly number of deaths was never attained until the third week in July; in one year (1857) it was delayed until September, and in six out of the ten years until August. Since 1864 (when during four years it had occurred in August), the point of maximum mortality (so to speak) has been, as a rule, retrogressive. In 1865, '66, and '70, it occurred in the third week of July—in 1867 alone in the fourth week—and in 1868, '69, and '71 in the second week, while the first week of July in the present year has doubtless exhibited the highest mortality. It is unfortunate that a constant record of *actual* daily deaths was never kept in this Bureau prior to July, 1870, as the direct relations between our mortality and meteorological fluctuations would have afforded a most interesting necrological study.

Both the mean temperature and humidity of the week which we are examining were exceptionally high—the former being 83.97° and the latter 75° (saturation being represented by 100°), as recorded at the Cooper Institute. There is no doubt of the deadly effect of a very high temperature in this city, particularly in conjunction with an excessive atmospheric humidity; and their simultaneous occurrence at an unusually early period of the season accounts for the extraordinary mortality of the week.

Many deaths which took place during this week, and which were ascribed to various obvious affections, were doubtless mainly due to the operation of meteorological phenomena. Thus throughout the whole category of diseases there was a very general increase in which all ages participated, but which was more manifest among the very young and the very old; 1,007 children under five years of age and 45 persons of seventy years and upward, were cut off during the week. Of these 1,007 infants, 618 fell victims to

diarrhœa, of whom 499 were babies less than a year old, and 604 less than two years old. The immunity from the fatal results of diarrhœa enjoyed by children older than two years is shown by the fact that but 15 between two and three years of age, but 6 between three and four years, none between four and five years, and but 5 between five and ten years of age died from any diarrhœal complaint. The total mortality from diarrhœa amounted to 653—41 per cent. of the deaths from all causes.

212 persons succumbed to the direct effect of solar heat (either exhaustion or sunstroke), 132 of which were cases of true insolation; 75 of the latter expired within six hours of the seizure, 106 within twelve hours, and 185 within twenty-four hours. The greatest number of deaths from solar heat—68—took place on July 2, on which day was recorded the maximum temperature during the week in both the shade and the sun, viz., 97° and 128° respectively, as well as the greatest degree of humidity, 84. Forty of the sunstrokes upon this day proved fatal within eight hours. The majority of all the sunstrokes affected people between adolescence and middle age. Children and old persons were the principal sufferers from exhaustion by heat. 39 sunstrokes were certified as occurring in habitual drunkards.

The same day mentioned (July 2) was marked by the greatest mortality—351 deaths—140 of which were caused by diarrhœal affections and 102 by diseases of the nervous system.

Very Respectfully,

Chas. P. Russel, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 4, 1872, *to July* 18, 1872, *inclusive.*

Simons, Jno., Surgeon.—By S. O. 20, Department of the Gulf, July 5, 1872, to relieve Surgeon Randolph as Medical Director of this Department, the latter to comply with S. O. 148, C. O., War Department.

Edwards, L. A., Surgeon.—By S. O. 155, War Department, A. G. O., July 6, 1872, his present leave of absence extended sixty days.

Page, Chas., Surgeon.—By S. O. 111, Department of the Platte, July 2, 1872, assigned to duty as Post Surgeon at Fort D. A. Russell, Wyoming Territory.

Vollum, E. C., Surgeon.—By S. O. 113, Department of the Platte, July 6, 1872, granted leave of absence for twenty days.

Whitehead, W. E., Assistant Surgeon.—By S. O. 117, Department of Texas, July 6, 1872, assigned to duty at Fort Brown, Texas, as Post Surgeon.

Girard, A. C., Assistant Surgeon.—By S. O. 117, C. S., Department of Texas, assigned to duty as Post Surgeon at Ringold Banks, Texas.

Dickson, Jno., Assistant Surgeon.—By S. O. 109, Department of the Platte, June 28, 1872, assigned to duty as Post Surgeon at Fort Fred Steele, Wyoming Territory.

Medical Items and News.

The Stranger's Hospital of this city has ceased to exist as such, in consequence of the lack of funds on the part of its founder. The Commissioners of Charities and Correction contemplate purchasing it for an Accident Hospital.

The Ulster County (New York) Medical Society has voted to hold its meetings every month, instead of half-yearly as heretofore. If this example were followed by some other County Societies throughout this and other States, it would have the effect of stimulating the members to a self-improvement very much needed in some quarters. Very many of these associations have only life enough in them to meet once a year and elect their officers, and send their delegates to their respective State Societies.

Dr. J. B. Murdock, formerly of Oswego, New York, has removed to Pittsburgh, Pa.

Rhode Island Medical Society.—The election of officers for the ensuing year resulted as follows:—*President*, Dr. Lloyd Morton, of Pawtucket; *First-Vice-President*, Dr. F. H. Peckham, of Providence; *Second Vice-President*, Dr. Geo. W. Jenckes, of Woonsocket; *Recording Secretary*, Dr. Edward M. Harris, of Providence; Dr. C. W. Parsons, of Providence, re-elected *Corresponding Secretary;* Dr. T. K. Newhall, of Providence, re-elected *Treasurer.*

Degrees Conferred on Medical Men.—At the annual commencement of the University of the City of New York, held June 20th, 1872, the following degrees were conferred on New York medical men: LL.D., upon Prof. Alfred C. Post, M.D.; Doctor of Philosophy, upon F. Leroy Satterlee, M.D.

Westchester County Medical Society, N. Y.—The annual meeting of this Society resulted in the election of the following officers: *President*, John J. Linson, M.D., of Tarrytown; *Vice-President*, C. W. Haight, M.D., of Pleasantville; *Secretary*, Wm. H. Helm, of Sing Sing; *Treasurer*, Jared G. Wood, M.D., of Croton Falls.

Yearly Statistics of the New York Board of Health.—Dr. Chas. P. Russel, Chief of Records of Vital Statistics, in his annual report says: The death-rate for the year was 28.6 per 1,000 of the population, a higher rate than can be found in any other city of importance throughout the States, with few exceptions. The total number of deaths caused by zymotic diseases during the year amounted to 8,364. Small-pox carried off 805 persons. During 1871, 70 persons, 27 men and 43 women, died at an age exceeding 90 years. Of the total number of deaths, 1,071 were due to accidents, 112 to burns and scalds, 15 to kerosene explosions (all women or young girls), 187 to drowning, 395 to fractures, 45 to suffocation, 14 to accidental poisoning, 82 to the Westfield disaster, 93 to steam and street railroad cars, 54 to the July riot—of whom 27 were Irish, 15 Americans, 4 Germans, 3 English, 1 Scotch, 1 Australian, and 1 Canadian.—There were 65 murders during the year, but only one murderer, a colored man, was hanged. There were 114 suicides, of whom the greater part were Germans.

The Sick of New York in 1871.—During the year 1871 there were 21,532 patients treated at the public hospitals, 17,717 at the Bureau for the Outdoor Sick, and 5,645 at their homes; 5,178 infants and small children were received at the asylums and nurseries,

and 1,738 boys had the benefit of daily instruction at the Nautical and Industrial Schools, and 115 of both sexes in the Idiot School. The number received at the several charitable institutions of the department were 27,877. At the Labor Bureau employment was obtained for 43,058 persons. To the City Prison there were committed 51,466 persons, of whom 21,182 were transferred to the Workhouse, and 2,368 to the Penitentiary. The aggregate number of persons received in the several institutions, including patients treated at their homes by the physicians of the department, and of the destitute relieved by the Superintendent of Outdoor Poor, was 195,334.

Amherst College, Mass.—Prof. Hitchcock, of this college, stated on the programme of the exhibition in the light and heavy gymnastics by the Junior Class, July 9, 1872, as follows concerning the health statistics gathered during the past eleven years. Of the 2,537 names on the annual catalogue for eleven years past, 464, or 14 per cent., or one student in every seven, have been entered on the sick-list, for a consecutive absence of more than two days from all college exercises. The average annual number of students in college for eleven years past is 232. During this same time the average annual number on the sick-list has been 37, or nearly 16 (15.9) per cent. Between one-fourth and one-fifth of all these cases of sickness have been of a mild or severe form of colds. There has been less than one-tenth of all these disabilities in the form of fevers, and only about one-twentieth of them have been of a typhoidal character. About one-thirtieth of these disabilities have been for injuries incurred in the Barrett Gymnasium; and yet no permanent evil has ever resulted from a single one of these accidents. The amount of time lost to study as averaged to each disabled man has been about two per cent. of the college course, or two days, and the lost time averaged upon all the students has been only one per cent. of the course.

Death of Aged Persons.—Sallie Roberts, for many years chief house servant in the family of President Madison, died in St. Louis, July 8, aged 107 years. Syracuse, N. Y., has lost her oldest inhabitant, who died at the age of 115. His name was Samuel R. Motts. His father was a negro and attained the age of 129 years; his mother was Irish.

Worcester, Mass., Lunatic Hospital.—Dr. Bernard D. Eastman, of Washington, D. C., has been appointed Superintendent of this Asylum in place of Dr. Bemis, resigned. Dr. Eastman was for some time connected with the New Hampshire State Asylum, and for the past seven years has been first assistant superintendent of the government hospital for the insane at Washington.

Massachusetts General Hospital.—The Treasurer of this Institution received recently the large sum of $446,000, being the result of the will of the late John Redman. The legacy, twenty years ago was only $50,000; but the advance in both real and personal estate since that time has increased the value of the gift to nearly half a million.

Medical Department Harvard University.—Dr. R. M. Hodges has resigned his position as Adjunct Professor of Surgery and Clinical Surgery at this institution.

An Honorary Degree to Prof. Gross.—The honorary degree of D.C.L. from the University of Oxford, England, has been lately conferred on Prof. S. D. Gross, of Philadelphia.

American Ophthalmological Society.—The meeting of this Society, which was to have been held at Newport, July 18, has been postponed till the third Thursday in July, 1873, for the reason that many members expect to be present at the International Ophthalmological Congress in London, August 1st.

Missouri Medical Association.—This Society convened in the hall of the St. Joseph Improvement and Manufacturers' Aid Society, April 23, 1872. The following gentlemen were then elected officers for the ensuing year: *President*, E. Montgomery, M.D., St. Louis. *Vice-Presidents*, Hugh Trevor, M.D., St. Joseph; S. S. Todd, M.D., Kansas City; E. J. Montgomery, M.D., Sedalia; D. H. Shields, M.D., Hannibal; J. P. Dimmitt, M.D., Clinton. *Recording Secretaries*, Dr. R. S. Anderson, of St. Louis; and Dr. Shaufller, of Kansas City. *Corresponding Secretary*, Dr. H. Z. Gill, of St. Louis. *Treasurer*, Dr. E. A. Donellan, of St. Joseph.

The Association adjourned to meet at Moberly on the third Tuesday of April, 1873.

Illinois State Medical Society.—At the Annual Meeting of this Society, the following officers were elected for the ensuing year: *President*, Dr. D. W. Young, of Aurora; *Vice-Presidents*, Drs. T. D. Washburn, of Hillsboro, and F. C. Hotz, of Chicago; *Assistant Secretary*, Dr. R. D. Bradley, of Bloomington. The next annual meeting is to be held in Bloomington, on the third Tuesday in May, 1873.

Indiana State Medical Society.—The twenty-second annual session of this Society was held in Indianapolis, May 21st and 22d. The following officers were elected for the ensuing year: *President*, Dr. Joel Pennington, of Milton; *Vice-President*, Dr. R. E. Haughton, of Richmond; *Secretary*, Dr. G. V. Woolen, of Indianapolis; *Assistant Secretary*, Dr. W. J. Elstun, of Indianapolis; *Treasurer*, Dr. J. H. Woodburn, of Indianapolis; *Librarian*, Dr. A. W. Davis, of Indianapolis.

The next meeting will be held on the third Tuesday of May, 1873.

Effect of Deficient Lime Phosphate.—Dr. Wieske has concluded some experiments upon animals, which go to show that the withdrawal of lime and phosphoric acid from the food injures the health and may destroy the life of the animal, but that the bones in consequence do not become more friable or suffer change of chemical decomposition.—*Mich. Univ. Medical Journal.*

An Appointment to the Peruvian Government.—Dr. E. L. Bissell, of New Haven, Ct., has gone to Lima to accept a position as surgeon from the Peruvian Government, with a salary of five thousand dollars.

A Prize for Chemical Tests.—At the annual meeting of the Massachusetts Medical Society, held in June, Dr. George C. Shattuck, President, announced that Dr. Miller, of Sheffield, had offered, through the Publication Committee, a prize of one hundred dollars for the best essay on Chemical Tests in cases of accidental poisoning, the conditions of the prize being that the essay should be really meritorious aside from its competitive excellence.

Maine Medical Association.—The closing session of this Society was held June 14. Dr. W. W. Green, of Portland, was appointed orator for 1873. The next meeting is appointed for the second Tuesday in June, at Portland. Drs. A. Fuller, of Bath, and Jordan, of Portland, were chosen delegates to the Medical Society of the State of New York.

Vienna Medical Students.—At the Vienna school fourteen hundred and seventy-one medical students are registered for the summer session. Of these five hundred and six are Hungarians.

Female City Physician. — The corporation of Springfield, Mass., has appointed Miss S. J. Williams as city physician.

A Large Stone.—Dr. Buckner, of Cincinnati, Ohio (*The Clinic*), exhibited, at the May meeting of the Cincinnati Academy of Medicine, a large stone which was removed from the descending colon of a horse by Dr. Bowler, a veterinary surgeon of that city. The stone weighed eleven pounds and three ounces. The horse from which it was removed was twelve years old, and had suffered from frequent attacks of colic, in one of which he died.

The Discovery of Chloroform.—Baron Von Liebig, in the *Annalen der Chemie und Pharmacie*, claims priority to Soubeiran, the French chemist, in the discovery of chloroform. The *Journal of Applied Chemistry*, however, calls attention to the fact that he says nothing about Mr. Guthrie, of Sackett's Harbor, New York, who prepared chloroform, under the name of chloric ether, early in 1831, before either the French or German chemists had discovered it. Liebig's communication shows that three men nearly simultaneously discovered chloroform, and the first on the list was Guthrie.

The Oil of Cloves. — At a late meeting of the Boston Society of Medical Sciences, Dr. Webber (*Boston Med. and Surg. Journal*) spoke of the merits of oil of cloves in the preparation of microscopical specimens. It is not so volatile as oil of turpentine, and preparations may be kept in it for examination for a day or two. If carbolic acid is used, the preparations must be washed with chloroform before Canada balsam is used; whereas with oil of cloves, Canada balsam can be used at once and the preparations do not harden as soon.

Puerperal Convulsions.—In a paper on this subject, published in the *American Practitioner*, by H. K. Pusey, M.D., of Garnettsville, Ky., the following statistics are noted. In the 68,435 cases of labor reported by Dr. Ramsbotham, there occurred 67 cases of convulsions, less than one in one thousand cases; Mad. Boivin, in 20,357 cases of labor, had 19 cases of convulsions; while Mad. Lachapelle reports 61 cases in 38,000 cases of labor. The ratio of convulsions to pregnancy and labor, in the largest number of cases that he has been able to gather, stand as one to about seven hundred.

A Collection of Pelves.—The Obstetrical Society of London has appointed a committee to form a collection of pelves, illustrative of various points in connection with obstetrics. The Hon. Secretaries to the Pelvis Committee, Alfred Wiltshire, M.D., and Heywood Smith, M.B., state that they will be willing, if desired, to make arrangements as to expense of carriage, casts, models, drawings, photographs, etc., with any society or gentleman in this country, who may wish to contribute specimens. Their address is at the Society's Library, 29 Regent street, W.

Jewish Mortality.—According Dr. Stallard's work on "London Pauperism," the mortality of Jewish children under five years of age is much less than among other children. There is no hereditary syphilis, and scarcely any scrofula. The mother engages in no employment that takes her away from her children. From one year to five the Jews lose only ten per cent, while the Christians lose fourteen. The average life of the Christian is 37 years—of the Jew, 49 years. Beyond sixty years, only a quarter of a Christian population will be alive, but a quarter of a Jewish population will exceed 71 years. In Prussia the Christian population requires 51 years to double itself, but the Jewish population will double itself in 41 years.

Whooping-Cough.—According to Mr. John Grantham (*British Med. Journal*), the steam from a mixture of an ounce of aqua ammonia to a quart of water, inhaled once a day, relieves and even cures attacks of this affection!

Persistence of the Hymen after Marriage.—At a recent session of the Gynæcological Society of Boston, Dr. Blake (*Journ. of the Gynæcological Soc. of Boston*) related a case of vulval eczema, attended by persistence of the hymen after marriage. He had found the hymen present, though the woman had been twenty years married, and so firm as to prevent the tip of the finger from entering. The husband had always been satisfied with his wife's condition, and she herself was ignorant that it was in any respect an unusual one.

Apparent Death.—Dr. W. H. Lathrop, Prof. Diseases of the Brain and Mind in Detroit Medical College (*Detroit Review of Medicine and Pharmacy*), in his paper on "Apparent Death," reports one of the most remarkable and best authenticated cases of trance on record, that of William (afterwards Rev. Dr.) Tennent. While studying theology at Princeton, N. J., he had a fit of catalepsy, being in a very weak state from close application to books, without proper attention to physical exercise. After a short illness he was regarded as dead, and the day was fixed for the funeral. His physician, however, believed him to be alive, and succeeded in having the funeral postponed from day to day for three days. The brother of Mr. Tennent then insisted that it was folly to suppose that he could be alive, and ordered that at a certain hour the burial service should occur. When the appointed time arrived, and the company were assembled, the doctor stood over his patient and asked for still another hour. At the end of that time the patient suddenly uttered a groan, and soon after gave other signs of life. His recovery was slow, and at first was attended with a loss of memory. He commenced anew the study of Latin with as much difficulty as if he had had no previous acquaintance with the language. After a considerable time his memory suddenly returned. This case is fully authenticated. The witnesses were educated persons, and all the particulars have been carefully described. Such cases, therefore, are *possible*, though extremely rare.

In conclusion he observes: 1st, That trance is extremely rare; 2d, That apparent life in those really dead is much more common; 3d, That in doubtful cases we should wait for the appearance of decomposition before allowing the burial to take place.

The First to Suggest the Idea of Dispensaries. —Dr. Samuel Garth, in 1702, was the first physician who suggested the idea of dispensaries where advice was given gratis to the poor. He may be considered the founder of those benevolent institutions. His poem of "The Dispensary" was a satire on the interested quacks and apothecaries who opposed the charity.

Organic Matter in the Breath.—Dr. Ransome, in his investigations into this subject, comes to the following conclusion: The total amount of organic matter passing out of the lungs in the space of twenty-four hours, the subject being in a state of health, is about

three grains. In disease the organic matter varies considerably; in health it is tolerably constant in quantity. On the other hand the quantity of free ammonia in the breath is very variable, even in healthy subjects. One of the most interesting results, given by Dr. Ransome, is the fact that a large quantity of organic nitrogenous matter is thrown off by the lungs in kidney diseases, especially in Bright's disease. A deficiency of organic matter was observed in cases of catarrh, measles, and diphtheria.—*Medical Times and Gazette.*

Mortality Statistics of San Francisco, Cal.—Henry Gibbons, Jr., M.D., San Francisco (*Pacific Med. and Surg. Jour.*), gives a general exhibit of the features of the mortality record for 1871, and believes that few cities, of whatever size, can exceed San Francisco in healthfulness, or at least in their freedom from fatal disorders. The census of that city for 1870 makes the population 150,361; assuming it to be correct, the death-rate was 19.6 per thousand, or one in about fifty inhabitants. While the population did not diminish, there was a diminution of mortality of nearly 400 from that of 1870. The mortality from miasmatic disorders was but 11¼ per cent. of the entire mortality. On the average about two-fifths of all deaths are of children under 5 years of age, but for 1871 the proportion fell to 32 per cent.

Male and Female Births in the United States.—According to Dr. Toner, of Washington, D. C., a law of nature almost uniform throughout the world produces a greater number of male than female births. The proportion of excess ranges in different countries and at different periods, from 1 to 12 in the 100. The rate of excess in the United States is about 6 in the 100. Among the colored race this inequality is reversed, the female births being an excess. The excess of males does not remain constant and uniform through life. There are more females of 20 years than there are males of the same age; and again between the ages of 80 and 100 there are more females than males living of the same age. The excess of males in the United States was in 1790, 58,786; in 1800, 114,353; in 1810, 113,138; in 1820. 128,329; in 1830, 184,018; 1840, 315,373; 1850, 499,736; 1860, 328,624. Owing chiefly to westward emigration, there was in 1860, at the commencement of the war, the following excess of females over males in the States named: New-Hampshire, 6,441; Massachusetts, 37,640; Rhode Island, 6,354; Connecticut, 8,159; New-York, 13,671; New-Jersey, 927; Maryland, 16,690; District of Columbia, 4,082.

American Children.—The foreign element in this country breeds more than double as many children as the strictly American. In the New-England States, formerly every family averaged about eight children. From the best information of the present day, it seems that in the families of the native population in those States they do not exceed three.

"Isolating Dressing of Wounds" is the term used by M. Viennois, in a late number of the *Gazette Hebdomadaire*, to indicate a mode of dressing wounds practised by M. Ollier for a couple of years past, which he believes to be superior in its effects to the water-bath as employed by Langenbeck. In cases where it is possible to do so, the part is immersed in a bath of oil, either by laying it into a trough of zinc, or, in the case of amputation, enclosing the stump in a pig's bladder (in the case of larger limbs) which contains a sufficient quantity of oil to completely cure the wound. The oil, he thinks, being of less s. g. than the fluids of the wound, allows them to gravitate to the bottom of the containing vessel where they are completely separated from contact with the wounded surface. When this process is not applicable, lint or charpie soaked in oil can be applied, and covered with cotton wadding and a bandage.

50 (?) per cent. of phenic alcohol can be added, if desired, to the oil, which may be so rendered antiseptic. Union, in small wounds, sometimes takes place by first intention.

The Totally Uneducated Deaf and Dumb.—"The Psychical Status and Criminal Responsibility of the Totally Uneducated Deaf and Dumb," is the title of an extended article by Isaac Lewis Peet, A.M., Principal of the N. Y. Institution for the Instruction of the Deaf and Dumb (*Journ. Psych. Med.*), in which the subjoined conclusions are pointed out:—

Society owes to itself the duty, not only of providing for the education of all deaf-mutes, but of making it imperative upon the parent or guardian, in each case, to secure to the child laboring under this misfortune the benefits within his reach. To the deaf-mute, education means everything; it means home and hope and happiness. It means also self-control and virtue.

As the law now stands, all officers charged with the care of those who, on account of poverty, are supported at the public expense, are obliged to place the deaf-mutes under their care at some one of the institutions for this class which the State has recognized. He would go further, and make it the duty of certain designated public officers to seek out all uneducated deaf-mutes, and require that they be educated.

The treatment of criminal cases, in which a deaf-mute is defendant, should be settled by statute. In every case that now occurs, the prosecution argues, from the intelligence the deaf-mute manifests in various ways, that he has moral and legal responsibility, and therefore should be brought to trial and punishment. The defence argues, on the contrary, that his condition as an uneducated deaf-mute, if acknowledged, being *prima-facie* evidence of insanity within the meaning of the law, he cannot be put on trial, even to ascertain his mental condition. As it seems to him, both the prosecution and the defence are in error; the former as to the fact that an uneducated deaf-mute can be considered responsible in any such sense that the law may visit his act with punitive treatment; the other, that he is to be classed with either the idiot or insane. Mentally and morally he is much more in the condition of a child.

Anæsthetic Discovery.—Dr. Robert H. Collyer, of Brompton-road, London, S. W., writes as follows to the *Medical Times and Gazette*, in regard to anæsthetic discovery: "Having in my possession the original publications of May, 1843, wherein I distinctly state that the inhalation of narcotic and stimulating vapors produce an anæsthetic state, prior to which date I had performed various surgical operations during this insensible condition, which enabled me to publish the fact in May, 1843, I cannot now understand how Horace Wells could be named as the originator of modern anæsthesia, when his first essay with nitrous oxide only dates from December, 1844. There can be no objection to raising a subscription for the widow on this side of the Atlantic, on the part of those who are unacquainted with the facts as they occurred at the time. It is, however, most unjust to myself to denominate Horace Wells the original discoverer."

ERRATA.

On page 292, Dr. Briddon's article, ninth line from top, substitute No. 17 for 7. Seventeenth line from top, omit the word *divided*. On the same column, thirteenth line from bottom, *conjunctive* for conjunctival.

Original Lectures.

THE RELATION OF DISEASES OF THE EYE WITH OTHER DISEASES:

A LECTURE, ILLUSTRATED BY THE MAGIC LANTERN, GIVEN BEFORE THE AMERICAN MEDICAL ASSOCIATION, AT PHILADELPHIA, MAY 8, 1872,

By HENRY D. NOYES, M.D.,

PROFESSOR OF OPHTHALMOLOGY IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

(Phonographically reported for the Record.)

The ultimate reach of a great invention cannot be at first realized. The steam engine, the microscope, are familiar illustrations. In medicine we begin to rightly esteem the teaching of the thermometer, while the ophthalmoscope has already vindicated its claim to be valued in researches which extend far beyond the organ which it inspects.

That the eye becomes affected in various diseases of the body has long been known—as in syphilis, in rheumatism, in fevers. We are in the habit of examining the pupils and of observing whether there may be erratic action of ocular muscles. The ophthalmoscope has taught us that a deeper investigation will reveal more of these symptomatic effects, and to these I beg leave to ask your attention.

My purpose is not to enter into minute detail, but to give an outline of various topics, more with the view of stimulating attention than to give the fullest measure of information. I desire to convey to the profession some of that knowledge which from the nature of the case has come at first into possession of workers in limited fields.

The eye-mirror is a glass which has given insight into diseases of such tissues of the body as the blood-vessels, the veins, the blood, the kidneys; which shows us effects of such dyscrasiæ as leucocythæmia, diabetes, syphilis, tuberculosis and cancer, and has information for us in epilepsy and insanity.

Permit me first to call your attention to the ophthalmoscopic appearance of the eye in a healthy condition. The object most conspicuous in the direct view is the disk of the optic nerve, where it enters at the bottom of the eyeball. This pale pink circular disk presents likewise the point of entrance and emergence of the blood-vessels which nourish the retina. The arteries, you observe, are lighter in color, somewhat smaller, and straighter than the veins. There are no blood-vessels in that part of the retina just external to the optic nerve, which is known as the "yellow spot."

You must notice now that this normal optic nerve presents a kind of double outline—the outer one sharp, which is the margin of the opening through the choroid; the inner one shadowy, where it enters through the hole in the sclerotic. You appreciate this more clearly as I substitute for one of these pictures another representing a section through the axis of the nerve. The shadowy outline is now seen to indicate the thickness of the sclerotic coat. Please take note of the fact that the fibres of the nerve, as they come into the eye, have to pass through an unyielding aperture; for this gives rise to certain peculiarities in its morbid phenomena which will by and by engage our attention.

The ophthalmoscopic appearances are liable to certain variations within the limits of health, and it is important to be familiar with these that we may have a proper point of departure for the diagnosis of pathological changes. You notice that in this typical picture the fibres of the nerve, the moment they leave the disk to enter the retina, lose their opacity and become perfectly transparent. Now in some of the lower animals it is the normal condition for these fibres to remain opaque for a short distance after passing over the edge of the sclerotic opening; and in this still healthy human eye which I now throw upon the screen, you observe above and below the circular disk a brush of nerve-tissue, evidently a continuation of the optic-nerve fibres, which have retained their opaque character. These brushes enlarge by so much the area of the "blind spot" in the visual field. Were you not acquainted with this appearance as one occasionally met with in health, you might easily mistake it for a morbid exudation, an error which has not unfrequently been made.

In another picture you notice a peculiar dotted appearance of the surface of the nerve, and also that the blood-vessels of its central, circular portion are less distinct than those of the rest of the field. This, on consideration, would be recognized as due to excavation of the disk, which is here present in a very high degree, but is yet physiological. You may compare it with the normal or more common degree of excavation exhibited by the slide I now substitute.

Passing from the physiological appearances, and omitting others of a similar character, I may remark that the lesions of the eye, observable in the affections to which I have alluded, consist of changes in the texture of the optic nerve and retina, changes in the blood-supply, hemorrhages, certain secondary atrophic changes, exudations, and various other results of morbid processes.

In examining a case, the question which naturally comes up first is, whether we are dealing with an anæmic or with a hyperæmic nerve. In forming a judgment upon this point there are not a few liabilities to error; for the blood-supply of the nerve-tissue varies as widely, within normal limits, as does that of the skin or of other organs. Moreover, there are many affections purely functional, which are commonly attended by a transitory hyperæmia of the nerve. On the other hand, the hyperæmic condition may be an important indication of cerebral disease. It is essential, therefore, to determine whether an excess of blood is dependent upon some functional disturbance or upon a permanent cause; and for this our most valuable criterion is the preservation or the loss of transparency in the head of the nerve.

In epilepsy much stress is often laid upon a hyperæmic condition of the optic nerve, as showing that the epileptic state is due to a hyperæmia of the brain-substance. This is doubtless true to a great extent, but I am convinced, from an examination of perhaps one hundred cases, mostly of protracted disease, that deductions upon this point must be very carefully made. My observation has discovered hyperæmia of the nerve in nearly all of them, but it is my opinion that only when this condition is profound can it be taken as an indication of cerebral hyperæmia.

The sources of the blood-supply to the optic nerve are worthy of our careful attention. First, there is the central artery, which comes from the ophthalmic and enters through the nerve to ramify upon the retina. But these retinal vessels are not those concerned in hyperæmia of the optic nerve itself. It is rather branches of the choroidal vessels, and also another set of minute branches which were shown, by the researches of Galizowski, to come from the cerebral arteries and pass

into the connective tissue of the nerve near its origin. The nerve-tissue, then, receives a part of its blood-supply from a source absolutely the same as that which supplies the brain.

In this plate, taken from Soemmering, *De Oculorum Hominis, etc., Commentatio*, Gœttingen, 1818 (and I may allude in passing to the excellence of the dissections and of the engraving done fifty years ago), you see the central vessel entering the optic nerve on its way to the retina.

Now we find pretty frequently apoplexies of the retina—hemorrhages more or less extensive from rupture of its vessels—as a cause of sudden loss of sight. These apoplexies may be due to accident—to a fit of sneezing for instance, or they may come from suppressed discharges, from disease of the blood-vessels, from impoverishment of the blood as in purpura, etc. But if there be any intra-cranial disease such retinal apoplexies are admonitory of possible apoplexies in the brain, as you will readily understand from the close vascular connection between the optic nerve and the brain. If a patient comes to you for sudden loss of sight, and you discover hemorrhage into the retina, and learn besides that he has been suffering from head-symptoms, such as loss of his usual mental activity, a little drowsiness or a little sleeplessness,—though these symptoms may have been so slight and vague as to seem quite trivial, they rise at once into very serious importance when accompanied by the retinal hemorrhage. You are to warn the patient that he has been overtaxing his brain, and that he may consider himself fortunate in the admonition his eyes have given him.

I show you here several illustrations of recent apoplexies, and also of the successive changes in appearance which result from absorption of the clot.

Another lesion of the retina, though less frequent, is no less interesting.

Some twelve years ago a patient was presented at the clinic of Graefe, in Berlin, with sudden and total blindness of one eye. Careful inquiry elicited that he had had rheumatism and was suffering from endocarditis. The ophthalmoscope disclosed a condition never before observed. All the little arteries radiating from the optic nerve were completely void of blood; the veins contained a small quantity, but the circulation in them had ceased. The existence of murmurs over the aortic valves led the shrewd observer at once to his diagnosis, that the case was one of embolism,—that a small fragment of exudation had been torn from the valves and carried along the current of blood until it entered the ophthalmic artery, and finally the arteria centralis retinæ, where it had been arrested and perfectly plugged the vessel and shut off the blood from the retina, and, of course, produced instant and utter loss of function. A few days afterwards a very large exudation made its appearance in the region of the yellow spot, as here exhibited on the screen. At a later date another picture was taken, and then the optic nerve was atrophied, the arteries quite empty, and the large white patch had been absorbed, and nothing remained of it except a few little opaque specks. Four years after his stroke of blindness this patient died in the Charity Hospital at Berlin, and the autopsy fully verified Graefe's diagnosis. Here is a picture of the section made through the optic nerve and the tissues of the eyeball. It was a most fortunate one, for it happened to pass straight through the middle of the arteria centralis retinæ, and through this little nodule, which was all that four years' absorption had left of the plug that had once filled the artery. Ophthalmic surgery can now point to no less than thirty or forty cases of loss of sight from embolism of this artery.

To carry a little further our outline of vascular disorders in the eye, in cases of stenosis of the pulmonary artery the vessels of the nerve have been found congested, just like the vessels elsewhere subject to observation. In these cases the venous system of the eye simply demonstrates to our sight a condition which we know must prevail throughout the body. There are some other forms of heart-disease evidence of which has been found in disturbance of the ocular circulation. Pulsation of the retinal arteries has been observed under some of these conditions, but our knowledge of this subject is very imperfect and we must await further investigation. The arterial pulsation is far more commonly due, however, to a purely ocular disease, glaucoma. Here the secretion of fluid and the consequent intraocular pressure become so great that the blood can no longer flow through the arteries in a continuous stream, and is only forced on in pulses by the ventricular contractions. Venous pulsation, on the other hand, is often found in the eye under certain physiological conditions, and has no important significance.

I must pass rapidly over these matters to enable me to speak of others in which the disorders of the eye may give valuable aid to the general practitioner in the diagnosis of other diseases. I come to the involvement of the optic nerve and of the retina in diseases of the nervous system, whether primary or secondary, to lesion of other organs.

The first condition to which I call your attention is denominated *simple atrophy of the nerve*. This presents itself as a change in tissue of the optic disk, unaccompanied at first by any change in the large vessels which pass through the nerve to the retina, but giving evidence of decided modifications in the capillary circulation of the nerve itself. In the picture you see that the disk has lost its pink hue and is pale or bluish. This simple atrophy may be a merely local trouble, unattended by any general disorder of the nervous system, but not uncommonly it is the forerunner of disease of the cord or of the brain. It was my fortune to meet with a case in which, besides the atrophic lesion of the nerve, something in the patient's behavior so impressed me that I told him he not only had an incurable disorder of sight, but there was no little risk of future insanity. It turned out in four years more that he did become insane, and was sent to the Utica Asylum, saying to the superintendent, as I afterwards learned; "I lost my eyesight about four years ago, and Dr. Noyes told me I would become insane." The prognosis in that case, however, was only a happy hit.

Perhaps I shall find no better place to speak of the value of ophthalmoscopic examination in cases of insanity. I have examined altogether, in various asylums, perhaps one hunderd and fifty patients to ascertain whether any inference could be drawn from the state of the fundus oculi, and I must say that I have found the most diverse conditions. For example, I have seen cases of acute mania with the optic nerve extremely hyperæmic, and other cases in which it was extremely pale. In most cases of dementia there was a loss of clearness in the texture of the nerve, indicative, perhaps, of changes of the same kind in the cerebral tissue as a cause of the sluggishness of the brain. There is only one class of cases in which I have found uniform results, the class designated by the term *general paralysis*, or *general paresis of the insane*. In these cases, almost uniformly, there was in the earlier stages a condition of positive and intense hyperæmia of the disk with moderate infiltration of the surrounding retina; in the later stages there was simply the appearance of atrophy. But this whole

subject is still under advisement, and I only wish that the ophthalmoscope might be employed in the examination of every insane patient.

There are many kinds of brain-disease in which the optic nerves become involved, and their involvement may take place in various ways—at least in two ways: either by the travelling of inflammation from the brain directly along the nerves by continuity of tissue, or by the production of inflammatory action not throughout the whole length of the nerve, but only at its ocular extremity. The appearance here shown you, where the extremity alone of the nerve is the seat of inflammation, has been designated that of *choking* of the nerve, and the term well expresses the etiology of the condition.* You remember that the head of the nerve enters the eye through an inelastic opening in the sclerotic:—now, under peculiar pathological influences, swelling takes place in the head of the nerve, its fibres become opaque, and they spread out upon the surrounding retina so as completely to obliterate all trace of the margin of the disk. The blood-vessels you see in this picture are contorted like the snakes on the head of the Gorgon. This is characteristic of the choked disk. Here is another case in which the choked condition is the result of serous infiltration. Here are two diagrams representing an early and a late stage of the same affection. In the one you see the exudation at the head of the nerve, the large tortuous vessels that speak at once of strangulation. In the other this has all passed off and left only the pale and shrunken look of atrophy. The next diagram shows another of the very varied forms under which this disorder exhibits itself. It is taken from a recent article on the subject by Pagenstecher, and was drawn from a section through the axis of the eye, made at a post-mortem examination. You see how the nerve, as it has just entered the eye, rises very much above the surrounding parts. This truly remarkable affection has been found to consist not in an exudation of plastic lymph, but in a change in the minute structure of the nerve-fibres. These undergo degeneration, their tubules become enlarged and in a most remarkable manner varicose, and their contents become granular. They resemble so much the forms of ganglion-cells that they for a time were so designated, but more careful study shows them to be produced by metamorphosis of the optic-nerve fibres, as above stated. I must add, for the sake of completeness, that ordinary inflammatory products are mingled with these nerve-changes, but are of insubordinate importance.

Another kind of neuritis does not exhibit the same degree of prominence of the disk, but shows the more usual signs of hyperæmia, exudative infiltration, etc. Examples of this I have seen in undoubted syphilitic inflammations of brain-tissues and in cases of apoplexy. I am warned by the bell that the hour has expired, and one important matter I have failed to touch upon. It is of especial interest to all practitioners, and is now pretty generally remembered, that in some cases of albuminuria the optic nerve and retina become inflamed. I will simply throw upon the screen two forms of Bright's disease of the fundus oculi. In the first the retina is the primary seat of the trouble, in the second the nerve. These appearances occur in albuminuria, no matter what its cause, whether Bright's disease, or scarlatina, or pregnancy, seeming dependent exclusively upon the impaired function of the kidney.

As to the special nature of these nerve and retinal changes, they do not in essence differ from the pathological conditions found where the lesion is not due to kidney disease. But although this is true, I must emphasize the statement that the lesions are of a very pronounced and recognizable character, that they often are the first signs to announce the existence of the kidney disease; that to the eye of the skilled observer they often tell a tale as certain and as sad as can be read in the field of the microscope.

I can merely call your attention to these facts, without dwelling upon them. But it is only necessary for the profession to give them its attention, to learn that much information of practical value is to be gained by the ophthalmoscope. The matter belongs especially to hospital physicians, and is not to be handed over to those who devote themselves exclusively to eye-diseases. To impress those of you who have the opportunity of cultivating this field of observation with a sense of its importance, has been my chief object this evening. I thank your for the kindness and patience with which you have listened to me.

* Albutt in his late work chooses the word "ischæmia" to designate this condition; but he seems to be unaware that this term has for years been applied to another and well recognized state, viz.: abatement of the circulation, as ischæmia retinæ, etc. See a case by Alfred Graefe, *Archiv f. Ophth.* B. viii. 1,143.

Original Communications.

MECHANICAL TREATMENT OF PARAPLEGIA.

By E. D. HUDSON, M.D.,

NEW YORK CITY.

The views have been recently advanced, by J. Brown-Séquard and others, that the paralyses associated with even the most extensive organic changes are often of an extent quite disproportionate to the existing lesions, and that consequently we are authorized in nearly all cases to look hopefully for favorable changes of symptoms, and for at least a partial restoration of functions.

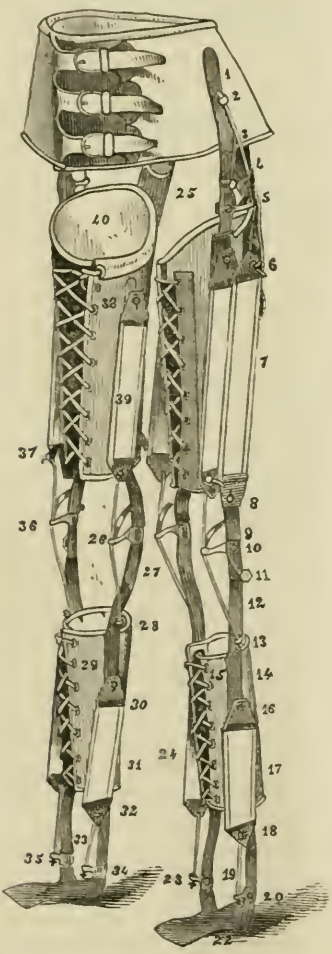
Therapeutic apparatus, when specially appointed for support and exercise, are invaluable to this end, not only for preventing the atrophy and loss of function of the paralyzed parts by disuse, but also in cases susceptible of restoration, for keeping them developed and exercised until the effects of the disorganizing lesion shall have lessened or passed away.

William J. Brown, aged thirty, late Private Co. A. 143d Regiment Ohio Vols.; well organized, healthy, had never been sick. While he was on duty at Wilson's Landing, Va., subject to exposures, he had a sudden and severe attack of congestion of his liver and spleen, with enlargement of both organs, attended with jaundice, and subsequent chronic diarrhœa. He was treated in camp by the surgeon of the regiment. His attack commenced on July 15, 1864. On the 13th of September following, he was discharged with his regiment, and returned to his home at Gavers, Ohio, with unabated and increased violence of his disease, which was protracted unto September, 1865, at which time he was seized with chills, and two days afterwards with complete paralysis of both of his inferior extremities. During the two immediate successive years his condition remained unchanged, but in the past four years his general health has very much improved, and his local affections abated.

The diagnosis of his present condition, Nov., 1871, assisted by Drs. E. D. Hudson, Jr., and S. R. Childs, re-

veuled general emaciation, inferior extremities greatly atrophied and paralyzed, excepting very slight flexion of the right leg and extension of the toes of the left foot. His respiration and circulation were normal, though somewhat feeble. The stomach and its functions somewhat debilitated, otherwise healthy. Liver and its secretions normal, also kidneys. Bowels in very good condition, also the bladder. The spleen was enlarged, indurated, and somewhat tender. Over and about the junction of the bodies of the dorsal and lumbar vertebræ anteriorly the soft tissues were thickened, tumefied, and tender. Nothing abnormal, or of tenderness over the spines of the vertebræ posteriorly, existed.

The lesion of the spinal meninges, and consequent paralysis, were due to and involved with the disorganized tissues and periosteal thickening over the anterior parts of the vertebræ, at the junction of the dorsal and lumbar bodies. His general health being much improved, the enlargement of the spleen having considerably abated, and the motor flexor nerves of the right leg, and extensors of the toes of the left foot exhibiting symptoms of recurrent action, the deduction *à priori* was, that the diseased tissues that caused the lesion of the meninges were slowly recuperating, and that a reasonable expectation might be entertained for a useful, if not entire, restoration of his limbs.



Cut Illustrating the Apparatus.

1. Steel side-braces and levers of pelvis, thighs, and legs, 1, 9, 12, 27.
2. Plantar plates, 22.
3. Leather bands, 3, 38, 40, 15, 29.
4. Eccentrics or pulleys, 5, 10, 26, 20, 23.
5. Artificial muscles, 7, 37, 39, 17, 24, 31.
6. Tendons of muscles, 3, 36, 19, 33.
7. Insertions of tendons, 2, 13, 28, 20, 35.
8. Stay-bolts for immobility, 4, 11.
9. Obturators to turn out feet and limbs, 25.

With no present command of his lower limbs, he was subjected to the humiliating process of sitting and carrying himself with his hands upon the floor, or the use of an invalid chair on wheels, to get from place to place.

The *indications* were *first*, for extension and support; and *second*, passive inductive exercise, to arouse and excite muscular contractility, and for auxiliary aid.

Those indications were efficiently subserved by apparatus so devised and constituted as to extend and render the limbs immobile or mobile, or to alternate their fixable or flexible state at pleasure. For those purposes, steel side-braces for both sides of each limb, their entire lengths, and from above the crests of the ilium, extending from the lumbar region to the bottom of the feet, and attached to plantar plates, having artificial ankle, knee, and hip joints, were used with strong leather bands to apply the steel supports and levers, to enclose the legs, thighs, and pelvic parts of the body, as is illustrated by the cut.

At the thigh and knee-joints levers were appended to extend beyond those joints with stay-bolts, for rendering the instrument immobile for reliable support at pleasure, and by loosening for alternate flexion and *passive motion*.

For the advantage of such exercise and aid to locomotion, very efficient elastic representative muscles, with strong tendons appended, were affixed to the levers of the pelvic, thigh, leg, and feet parts, to represent in force and action the glutei, gemini, and obturator muscles of the thigh-quadriceps femoris for the leg, and tibialis anticus for the foot. The simulated muscles being attached at one end to the relative parts of the steel braces and levers, their other ends to tendons which were passed over eccentries or pulleys at the thigh, knee, and ankle joints, and strongly inserted to relative parts of the braces, acted efficiently to extend the thighs upon the body, the legs upon the thighs, and to flex the feet upon the ankle-joints by their attachments to the plantar plates. The apparatus very reliably and satisfactorily fulfilled the desiderata, to enable the subject to stand upon his feet and limbs, with the aid of crutches or the backs of chairs to assist him to balance, and to move with an ambling gait, and by rendering the apparatus of either limb alternately flexible, to exercise the limb quite freely and forcibly by passivity.

The moral effect upon the subject, to be enabled to stand erect upon his feet, and to move, not crawl, upon the floor, and the exercise of his will-power to strive to move, was one pleasing result.

The exercise of his limbs by mechanical power, flexing and extending them, thereby inducing muscular contractility and inductive volition, was another favorable result. Blisters over the region of the diseased parts, with the use of strychnia, were recommended.

The patient returned to Ohio feeling greatly encouraged, where he is using his apparatus and has somewhat improved.

With a persistent exercise of his will-force, and use of the combined immobile and mobile agency, succession of small blisters and strychnine to their surfaces, it is reasonable to expect that he will recover mainly, if not entirely, the natural use of his limbs.

BLINDNESS AND DEAFNESS IN CONSEQUENCE OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.

By H. KNAPP, M.D.

During the last three months and a half there have come under my care forty-one cases of blindness or deafness, the consequence of cerebro-spinal meningitis, which has for more than six months assumed an epidemic character in this part of the country. Among the forty-one patients thirty-one were deaf on both sides, eight were blind with one eye, mostly the left, one was blind with both eyes, and one was deaf on both sides and blind on one. In all cases the diagnosis of cerebro spinal meningitis could be well established. The symptoms were:—mostly a sudden attack of headache, increase of temperature, vomiting, convulsions with predominant opisthotonus, unconsciousness, deliria, constipation, great debility after the acute symptoms, staggering gait with a tendency to fall sideways, lasting for weeks and months after the recovery. Among the complications I may mention inflammations of the joints in some cases.

The affection of *the eye* begins usually in the first weeks of the general disease with the following symptoms: circumcorneal injection, discolored iris, ragged pupil, fundus oculi dull, its details not recognizable, or the fundus yielding only a sombre red color, or appears black. Hypopyon and yellowish exudation plugging the pupil are not infrequent. The cornea in some rare cases becomes ulcerous; in others, the conjunctiva and lids are œdematous and very red, the eyeball protrudes, and exceptionally bursts, suppurates, and shrinks. Ordinarily, the injection of the conjunctiva subsides, the cornea clears up, the hypopyon and exudation in the pupil disappear, and the eyeball assumes a strikingly peculiar and characteristic appearance, which I have only seen in cerebro-spinal meningitis, puerperal fever, and very seldom in typhoid and typhus fevers. The iris is dull and bulges forward like a cone, its periphery, however, is usually drawn backward. The pupil is rather narrow, ragged, and immovable. Through the transparent lens, which has advanced with the iris, a dull white surface is visible in the vitreous chamber. The eyeball is commonly softer and smaller than natural. Sight is completely and irrevocably lost. Later, the crystalline becomes cataractous. The eyeball will remain smaller and softer, squint outward, but never give rise to other inflammations, or sympathetic affection of the other eye. I supply these facts from my observations of the epidemic of cerebro-spinal meningitis which reigned in the upper valley of the Rhine eight years ago. This eye-affection has been mistaken for medullary cancer (glioma) of the retina, but may be distinguished from it by its acute development in combination with the general disease, the peculiar protusion of the centre of the iris and its retraction at the periphery, the dull white reflex from behind the pupil, and the diminution of size and tension of the globe.

The nature of the eye-affection is purulent choroiditis, probably metastatic. There have been other changes of the eye observed in cerebro-spinal meningitis, principally hyperæmia and inflammation in and around the optic disk; they are rare and not specifically dependent upon this form of meningitis, but on hyperæmia, exudation, and proliferation in the cranial cavity in general.

The *ear-affection* in cerebro-spinal meningitis does not show symptoms so peculiar as the eye-affection. In the early stage hyperæmia of the middle ear is commonly present, the drumheads being dull, yellowish, the region of the handle and upper portion red, and the light spot faint, smaller, or absent. The pharynx is generally red. The tympanum is inflatable, with a rough blowing sound, after which the appearance of the membrana tympani is not essentially changed. In very rare cases only the affection rises beyond this condition of a mild catarrhal otitis media, developing into purulent inflammation of the drum, with perforation of the drumhead and otorrhœa, which ceases in one or several weeks. These symptoms on the part of the middle ear are, however, of subordinate significance when compared with those furnished by the *inner ear*. In some cases patients at first find sounds around them —for instance, the song of a canary-bird — intolerably harsh, but very soon the hearing-power will diminish, and in nearly all cases be totally and permanently destroyed. When the patients retain their consciousness impairment of hearing may be noticed as early as the second day of the disease, increasing day by day to total deafness in a week or two. In the majority of cases the deafness is only discovered when the patient awakes from his stupor; and may then be total or partial, increasing, in the latter instance, to total deafness very soon. I find, however, in my notes some cases in which hearing was still present some weeks after the disappearance of the severe symptoms of the acute disease, and was lost during the recovery. In all cases the deafness was bilateral, and, with two exceptions of faint perception of sound, complete. Among the twenty-nine cases of total deafness there was only one who seemed to give some evidence of hearing afterward. The treatment consisted in leeches behind and before the ear, blisters, tincture of iodine, ung. tart. stibiat. behind the ears, and the use of the galvanic current. I have seen no good results from this treatment, nor have I heard of a better one to substitute it.

In conclusion I may say a few words concerning the age of the patients, the mortality of the epidemic, and the nature of the ear-disease. The majority of the patients were under 10 years; above that age there were one of 10, 12, 13, 14, 16 years respectively, and two of 18 years. The epidemic does not seem to show a great rate of mortality: Dr. Ch. F. Rodenstein, of Westchester, N. Y., states only 10 per cent., while other epidemics showed a death-rate from 30 to 75 per cent. The nature of the ear-disease is in all probability a purulent inflammation of the labyrinth, by which the membranes of the inner ear are destroyed in a similar way as the membranes of the eye by the purulent choroiditis. Heller and Lucae have corroborated this by three post-mortem examinations. No disease of the middle ear could annihilate the hearing so completely that no sounds whatever, not even a tuning-fork vibrating on the cranial bones, is perceived. The deafness cannot be the consequence of a destruction of the acoustic nerve within the brain, or of the centre of audition; for it would be unexplainable why the adjacent facial or other cranial nerves are not, sometimes at least, found destroyed too. An additional proof is furnished by Dr. Gruening, who electrized the greater number of these patients according to Brenner's method, and obtained the normal reaction of the acoustic nerve, a fact which excludes the destruction of the nerve and centre of audition.

In communicating these observations to the profession, may I ask the favor to be invited, if not inconvenient, to assist in post-mortem examinations of lethal cases of cerebro-spinal meningitis?

New York, 25 W. 24th Street, July 22, '72.

TANNIN PACKING IN PROLAPSUS UTERI, ETC.

By G. P. HACHENBERG, M.D,

ROCHESTER, N. Y.

For many years I have treated prolapsus uteri by packing tannin around the mouth and neck of the womb. I was led to adopt this mode of treatment in the management of the following case:—In 1858 a lady came under my treatment, having labored under this form of uterine disease for fifteen years. She was married, and about fifty years of age. She had had an abortion to which she attributed her difficulty. Having ample means and intelligence, she consulted some of the most eminent obstetricians and surgeons of this country. She was not able to tolerate the pessary, or any other mechanical support, and no treatment, either local or constitutional, resorted to in her case for the prolapsus, gave her any permanent relief; the disease only becoming more aggravated, until the os lay low in the vagina, and at times was even exposed. When she came under my treatment I found her health generally impaired, nervous, and subject to violent hysterical paroxysms of irritability of the stomach. There was no disease of the uterus, except a remarkable elongation of the cervix, with the os lying close to the external opening of the vagina. It was evident that the conical shape of the cervix, acting as a wedge on the walls of the vagina, caused the prolapsus.

After giving the patient the necessary constitutional treatment, and believing that as long as the cervix uteri was in its present shape and condition no relief could be given, I proposed to my patient the extirpation of the cervix by the aid of the écraseur. My proposition was submitted to Professor Sager, of the Michigan Medical University; who, after learning the history of the case, did not fully acquiesce in my view, submitting however, the case to my judgment. The patient first consented to the operation, but afterwards objected to it, and requested me to try once more the effects of local treatment.

Of all local remedies to meet the indication of the case, I could think of none so favorably as of tannic acid. Taking its therapeutical properties into consideration as a powerful astringent—that it would corrugate without irritating the integuments—I conceived the idea of retaining it in its place by a thorough packing. This I accomplished in the following manner:—

A glass speculum was introduced into the vagina so as to push the uterus into its place. Through the speculum was introduced a metallic tube or syringe, with the end containing about thirty grains of tannin. With a suitable piston the tannin was now pushed out of the cylindrical tube against the uterus. The cylindrical syringe was then withdrawn, and the packing was neatly and effectually completed with a dry probang around the mouth and neck of the womb. After the packing was completed the probang was placed against the tannin in order to hold it, and the speculum was partially withdrawn. The packing was now fully secured. The probang was next withdrawn, closely followed by the speculum.

The application of tannin held the uterus firmly and securely in its place, not by dilatation of the walls of the vagina, as in case of the use of a pessary, but rather by an opposite condition—by corrugating and contracting the parts. The patient was promptly relieved by the application, and to her great astonishment was able to take long walks with comparative comfort.

The happy effects of this packing continued about a week, when symptoms of a relapse began to show themselves. Another packing was resorted to, with the same good effects. As we proceeded with the treatment of the case we prolonged the intervals of the application. At first they were made weekly, finally but once or twice a month. In two years the cure was completed, and I understand that the lady enjoys comparative good health since.

The almost constant application of tannin to the uterus not only overcomes the hypertrophy and elongation of the cervix, but I think even induces a slight atrophy of the parts. At no time did the patient suffer from this local treatment.

From its good effects in this case I was induced subsequently to continue the treatment by tannin packing in another case.

When Surgeon of the 28th O. V. I., in the War of the Rebellion, I was requested to treat one of the officers' wives, who suffered with a painful prolapsus uteri, complicated with an ulcerative inflammation of the os. There was an exhaustive leucorrhœa, leaving the system in a weak and anæmic condition. She had the prolapsus a year. I enforced a tonic constitutional treatment, giving her aperients, strychnine, and iron, and resorted to the tannin packing at intervals of ten days. The first few applications created some irritation; but soon the parts tolerated the acid, and in three months she was entirely relieved.

In 1868, when surgeon in charge of the U. S. Hospital at Ft. Randall, D. T., a laundress of the institution was much troubled with chronic prolapsus uteri. She had worn a pessary for many years. I removed the instrument, and treated her with success by tannin packing. The application usually was made in the morning of the day, when she was to do a heavy day's washing. This poor woman said, after making an application: "After you put that medicine in I feel well and strong, —I feel as if I had no womb."

Since that time, while in Rochester, I have treated with uniform success many lady patients who were subject to prolapsus uteri. As I have hardly failed to control the most obstinate case of prolapsus by this treatment, I discard the use of the pessary.

The packing is likewise indicated in some cases of displacement of the uterus—indeed in all, when complicated with prolapsus. As a remedy for leucorrhœa, where the seat of the inflammation is at the mouth of the womb or within the vagina, it usually gives prompt relief.

A few months ago a lady consulted me for chronic ulceration of the rectum, located within two inches from the sphincter. So sensitive were the affected parts, that almost any local application caused pain and unpleasant constitutional effects. For weeks I treated the case with an injection composed of tannin, glycerine and black wash, with some benefit. Finally I resorted to tannin packing into the rectum once a week. In a month the discharge of pus and saneous matter ceased, and the patient rapidly improved.

In affections of the throat I have made direct applications of the tannin to the affected parts, with satisfactory result. I have now a young lady under treatment for an extraordinary hypertrophy of the tonsils. Preparatory to the operation of extirpation, I every other day pencilled the tonsils with a thin paste of iodide of tannin (tannin mixed with the tincture of iodine, until the composition was of the consistency of syrup). These applications have diminished the hypertrophy so rapidly, and to such an extent, that in all probability a surgical operation may not be necessary.

I have tried no remedy that gives such prompt and

satisfactory results in certain forms of chronic ophthalmia and opacity of the cornea as this. Once a week place under the eyelids pure well-triturated tannin. The application is not very painful; and as the tears soon dissolve the tannin the inconvenience it will occasion will be but for a few minutes. An aged lady of Coxsackie, who had chronic ophthalmia, was relieved by one application. Another case of sympathetic ophthalmia was benefited by the weekly use of tannin into his eyes. Miss Lena Carson, of Medora, Ill., who was blind from opacity of the cornea and chronic ophthalmia, recovered her sight mainly by the local use of the powdered tannin.

Reports of Hospitals.

CHARITY HOSPITAL.

CLINICAL RECORD OF A CASE OF TRISMUS NASCENTIUM.

By CHARLES A. FORTUN, M.D.,

HOUSE PHYSICIAN.

Edward Fox, æt. 7 days, was born on the 22d of March, weighed eight pounds, and was a healthy-looking infant. On the morning of the first of April the mother called my attention to her child, saying that it refused to take the breast, was fretful, and had been so since the day previous.

On examining the little patient, I found that its jaws were clinched, the muscles of the neck rigid, and the head slightly thrown backwards; eyes were fixed, the forehead wrinkled, and the face had a very peculiar expression. Both thumbs were inverted into the palm of the hands and tightly clasped by index and ring-fingers; I tried to open his hands, but did not succeed in doing so without using unjustifiable force. His legs were crossed and rigid. The umbilical cord fell off on the fifth day, and the umbilicus appeared to be perfectly healthy, giving no sign of local irritation or inflammatory action. The child had been constipated for several days. Bowels were moved by the administration of Mannæ, ʒ ij.; Aquæ anethi, ʒ j. given in drachm-doses till effect was obtained. Patient was seized with the above-mentioned symptoms two days after the cord came off, and in the mean time the little fellow had spasms twice.

On the 2d of April one grain of bromide of potassium was administered every two hours, but without any apparent benefit; the child began to sink; whiskey was given in a teaspoonful of milk every three or four hours. This course of treatment was continued up to the 15th, when I showed the baby to Dr. W. R. Gillette, who confirmed the diagnosis of trismus nascentium, and suggested that the bromide of potassium should be suspended and hydrated chloral administered instead, giving two grains at a dose at intervals of two hours, and to watch carefully its effect, lest fatal narcotism should ensue. By mistake six grains were given in the course of two hours, and the child appeared to be dying from its effect; a teaspoonful of whiskey was administered and the patient was rolled from side to side until the effect had passed off. Child was weighed and had lost three pounds, weighing only five.

April 16*th*. The manner of giving the stimulus was changed; instead of by the mouth it was administered per rectum, as at each dose the little patient appeared to have great difficulty in swallowing, and the tonic spasms were aggravated.

April 17*th*. The patient had complete opisthotonus with general muscular rigidity, and we could handle him like a piece of wood; the chloral was continued. Dr. Budd advised that I should use the ether spray in conjunction with the pursued treatment.

April 18*th*. The spray was applied along the spinal column for about two minutes.

April 19*th*. The application was attended with marked increase of spasm.

April 20*th*. The child appeared more relaxed, and the opisthotonus was not so well marked. The chloral was continued; and the spray used three times a day, and each application for about two minutes.

April 21*st*. Patient improved; treatment continued.

April 22*d*. Was surprised to see the little fellow yawn, and open his hand for the first time during the whole period of his sickness; the mother appeared delighted when she put the child to her breast to see how well it nursed. Chloral and spray continued.

April 23*d*. Child doing well; treatment continued.

April 24*th*. All treatment was suspended.

The patient continued doing well and gaining flesh. On the 7th of May I had the satisfaction of discharging him cured, he weighing eight and a half pounds.

The treatment throughout the disease consisted in keeping the patient semi-narcotized, and supporting him at the same time by means of stimulus in the form of whiskey mixed with milk. The amount of chloral the patient took during the first twenty-four hours before the effect was obtained was surprisingly large—two grains were administered every two hours till he had taken twenty, and then it took a very small quantity to keep him under its influence. Sometimes as much as an ounce of whiskey was consumed by the patient during twelve hours.

Progress of Medical Science.

Progressive Pernicious Anæmia.—Prof. Biemer contributes an article on this affection to the *Medizinische Central-Zeitung*, and characterizes it as invariably fatal. Within five years he has seen fifteen cases. The patients have a hydræmic appearance, but are not emaciated, the appetite fails, anæmic sounds are distinguishable in the arteries, capillary hemorrhages take place, especially in the retina, disturbance of vision often takes place, fever is present, and the debility is progressive. Fatty degeneration of the heart and other muscles is present after death.

Blue Light as an Organic Stimulant.—At a recent meeting of the Philadelphia Agricultural Society, General Pleasanton read an interesting paper on the effects of sunlight on plants and animals, when transmitted through blue glass. Geraniums which had become unhealthy recovered their vigor and became more deeply colored when covered with blue glass; and the branches of the same grape-vine showed a remarkable difference in their growth of leaves according as they were or were not covered with blue glass, the leaves on the former having a diameter of six to eight inches, being of a deep-green color and perfectly healthy; while the uncovered branches were only two inches in diameter, and of a pale, sickly yellowish color, indicating a feeble vitality. The paper also mentioned a case of the wife of a Philadelphia physician who had for some time been suffering from a complica-

tion of disorders which had baffled the skill of her physicians, and who, on the suggestion of General Pleasanton, tried the following plan: Every other pane of glass in one of the windows of the patient's room was removed and blue glass substituted, and the patient required to expose her back and spine to the action of the combined blue and white lights for thirty minutes each day, at the same hour. At the commencement of treatment she was unable to sleep or eat, was in a miserable condition, and wasting rapidly. At the end of ten days the pains in her back were less, her hair had commenced growing thickly, and there was a marked improvement in her general condition. In three weeks she was almost entirely well.

Treatment of Uterine-Fibroids by Subcutaneous Use of Ergot.—Dr. Hildebrandt, of Königsberg, reports nine cases of this affection treated by ergot subcutaneously applied. He employs a solution of three parts of aqueous extract of ergot in 7.5 parts of distilled water, and the same amount of glycerine. Langenbeck's solution he has found to produce pain, owing to the alcohol which it contains, while the solution which he recommends is free from this objection, and, moreover, does not cause suppuration. Somewhat tender indurations are now and then left for some time at the seat of injection, the lower part of the abdomen being more sensitive to puncture than the region around the umbilicus. In general, the operation is unattended with unpleasant results. At the time of menstruation, and for a few days before and after, slight bleeding may take place from the punctures.

Case I.—A female, aged 31, had a tumor in the hypogastrium for three years, which had the appearance of a gravid uterus at the seventh month, and which was diagnosticated to be an intra-uterine fibroid. The apex of the tumor was four inches from the symphysis pubis, and about the same in antero-posterior diameter. Hemorrhages were frequent and copious. It was to relieve this symptom that M. Hildebrandt resorted to the use of ergot, with the motive also of producing contraction of the uterine walls and the engagement of the tumor in the mouth of the uterus where it would be within reach of surgical measures. The injections of ergotine gave a remarkable result. Having been injected each day for six weeks with the contents of a Pravaz's syringe, the menstruation became more regular, less abundant, and less painful than before. On the cessation of the menses the daily injection was continued, the tumor becoming smaller from week to week, and at length disappeared after fifteen weeks of this treatment.

Case II.—The result, without being equal to those of the preceding, was nevertheless favorable, the uterus being certainly diminished in volume by the absorption of the intra-uterine tumor; menstruation became regular, and pain and leucorrhœa disappeared.

Case III.—A woman of thirty years had had menstrual troubles since the age of sixteen, the courses sometimes lasting from six to eight months. Anæmia and emaciation were extreme. The fundus of the uterus reached nearly midway from the pubis to the umbilicus. By touch a tumor could be distinguished in the right anterior wall of the uterus. Subcutaneous injections were made daily from January 17th to March 5th, 1872. When the patient was discharged, the menstruation lasted only three days and was regular. The general condition of the patient was improved, and the uterus notably diminished in size, the vaginal portion having in great part returned to its normal volume.

Case IV.—A woman of forty-five years presented a tumor the size of an infant's head, the uterus filling the pelvic cavity. The hypertrophied cervix projected from the vulva. In November, 1871, the vaginal portion of the cervix was amputated, and after the wound had healed the injections were commenced. On the 15th of April following, after thirty-six injections the uterus was easily movable, and was sufficiently diminished in size to admit of the adjustment of a ring pessary.

Case V.—A woman of forty-four years, whose uterus presented the appearance of one seven months pregnant. It was irregularly developed, on the right reaching beyond the umbilicus and nearly to the false ribs. The treatment extended over one hundred and twenty days, an equal number of injections being made. The general condition of the patient was much improved, and the top of the tumor extended only to the umbilicus.

Case VI.—In a woman forty-five years old, the uterus reached to the umbilicus and was anteverted. A large fibrous tumor occupied the anterior uterine wall. Hemorrhages, and irregular menstruation. The improvement was equally well marked, the fundus uteri descending to a point midway between the symphysis and umbilicus.

Case VII.—A female suffering from profuse, irregular, and painful menstruation which had caused anæmia and emaciation. The uterus about the size of one in the fourth month of pregnancy. After ten injections and one menstrual period, a polypus the size of a hen's egg appeared at the mouth of the womb, which could not, however, be seized, on account of the narrowness of the cervix. Twenty-four injections more were made, by which time the menses became regular, painless, the uterus diminished in volume, and the polypus smaller and more movable, but still not accessible to the *écraseur*.

Case VIII.—The uterus the size of one in the ninth month of pregnancy. After six injections symptoms of poisoning by ergot appeared, and the treatment was suspended for six days, when it was again undertaken. After half a dozen injections the symptoms of ergotism supervened, and after still a third attempt followed by like results, the treatment was discontinued without any amelioration having taken place in the condition of the uterus.

Case IX.—In this case, a woman of twenty-four years, with a sub-peritoneal fibroma, could not support the treatment, and but three injections were made.

It is not easy to define in these cases the mode of action of the ergot. It would seem, however, that the contractions produced by the ergot in the nutritive vessels of the tumor, and also in consequence of the compression of the tumor by the contraction of the uterine walls, the nutrition of the tumor was modified, and fatty degeneration and absorption of its substance took place. It is probable that intra-uterine tumors would be more easily modified than the sub-peritoneal variety; and that myomata would be more easily treated than fibromata.—*Berliner klin. Woch.*, June 17th, 1872.

Vital Temperature.—Dr. Jacobson, of Königsberg, reports in Virchow's *Archives* (vol. li. 2d part) a series of experiments upon animals relative to the temperatures of certain viscera, as measured by thermo-electricity. He has found, contrary to the assertion of Cl. Bernard, that the blood is warmer in the right than in the left heart; but has verified the assertion of the same author, that the temperature of the liver is superior to that of the axilla and the rectum. He has also observed that the temperature of the skin and muscles, when exceedingly inflamed, never attain a temperature equal

to that of the interior of the body, or to that of the upper part of the vagina or rectum. By experiment on animals, in which pleuritis was caused, they verified the assertion of J. Hunter, that "local inflammation can never attain a higher temperature than that found at the source of the circulation."

Bodies found in Syphilitic Blood.—Dr. Vincenzo Brigidi has seen in blood taken from the corpse of a syphilitic person several peculiar bodies:—1st. A large number of shining granulations, which were round and moved freely in the serous portion of the blood, or were adhering to the white corpuscles, the borders being about 2.000 to 1,000 of a millimetre in diameter. 2d. Other bodies, resembling a walking-cane in form; refracting the light strongly; about 2,000 of a millimetre in length, and from 10,000 to 8,000 of a millimetre in thickness. Some of these bodies were adherent to one another in a linear form, to the number of two or three, showing an articulation at the point of connection; but the majority of these bodies were separate. 3d. Some vesicular spherical bodies, about the size of leucocytes, covered with a very delicate whitish membrane, and containing a clear fluid and a multitude of small granules.—*Lo Sperimentale.*

Propilamine.—Dr. J. Namias (*Journal di Science Medici*, of Venice) claims to have discovered a substance called propilamine, which may be extracted by distillation from certain organic matters, as the pickle of fish, cod-liver oil, human blood and urine, the ergot of rye, and from the *chenopodium vulvarium*. He says it has proven to be a valuable remedy in articular rheumatism, in doses of from two to five grains every two hours. [Cases of acute articular rheumatism are also reported, which have recovered rapidly when treated with bread-pills.—Ed.]

Influence of Rheumatism on Character.—In a translation of Dr. Faure's article on this subject (*Archives Générales*, Sept. 14, 1871), by Dr. S. G. Webber, of Boston, Mass., in the *Journ. Psychological Medicine*, it is shown that rheumatism is manifested under such variable forms that one may inquire, on meeting anything unusual in a patient subject to its attacks, whether rheumatism may not be concerned therein. Why may it not attack the organs of the cerebral functions on which character depends, as well as the heart, etc ?

A man who is subject to rheumatism will very often state that he has moments of despondency without cause, of inquietude, of forlornness, inexplicable to himself. Then he is discouraged without cause, and sees everything in the shade; that which ought scarcely to be the object of a slight care becomes the cause of a cruel torment; he is without force, his thoughts can be fixed on nothing, all intellectual work is impossible; if he wishes to solve a problem he soon experiences fatigue and heaviness of his head, which often turns into a violent headache; then his sensations are altered, his affections cease, he is indifferent to everything; that which has the most right or power over his mind, remembrances which are most dear or most painful, have no interest for him. His character has changed. He is conscious of his condition, and can for a few minutes rouse himself out of it. A crisis may follow, his head is congested, he feels quite giddy. Finally all these symptoms disappear, and his mind recovers its tone and clearness. The attacks vary much with individual disposition.

Steatorrhœa Flavescens.—The following additional specimen of *Steatorrhœa flavescens*, with history, has lately been added to the Dermatological Museum of the Royal College of Surgeons of England: Hair from the head of a lady in her 82d year; the hair has a bright golden-yellow color, and is stained by a "gummy golden secretion, sticky between the fingers," which accumulates on the head, and stains (of a yellow color) not only the hair, but also her night-cap and night-dress. The secretion is most abundant on the occiput at the roots of the long black hair, and its large quantity in that situation may be perceived in the preparation. The smell of the secretion is unpleasant, and the color yields but little to soap and water. In youth the lady's hair was of a jet-black color, but for many years past it has been white. Fifteen years ago she suffered from jaundice; a similar attack was repeated ten years afterwards, but passed completely away; and it is since the last attack that the change in the hair now described has taken place. Her husband, a medical man, observes: "It is remarkable that the secretion should be confined to the scalp, found on the surface, and taken up by the hair." The lady enjoys good health, but is somewhat unduly encumbered with adipose tissue.—*Med. Press and Circular.*

Bright's Disease in Children.—According to Drs. Steiner and Neuritter (*All. med. Cent.- Z.* and *La Nuova Ligiuria Medical*), Bright's disease is far more frequent than is supposed in children. The difficulty of diagnosis resides in the want of examination of the urine. It is common in children from two to eight years old. Scarlatina, measles, and variola often cause it. Girls are more subject to it than boys. Blows, falls on the loins, or abuse of diuretics may cause the disease. Cold may cause it. Scrofula and tuberculosis favor the appearance of the disease, as do morbus coxarius, cholera, rickets, and chronic pneumonia. Bad and unnutritious food also favor it. The prognosis is in general more favorable than in adults; but the prognosis is bad when the albuminuria is chronic. Convulsions are not so likely to be a fatal symptom in the beginning as when the disease has existed for some time.

The authors, for treatment, recommend in the acute stage, digitalis, or, if this be not well borne, nitre; and for the pains in the loins, sinapisms. They have not seen any good effect from tannin. When the symptoms of hydræmia appear, they recommend tonics, quinine, etc. Diuretics are contraindicated, as they produced an injurious excitation in the kidneys; but sudorifics and carthartics are recommended instead. When nothing contraindicates it, an infusion of senna repeated occasionally may prove successful. When uræmic symptoms arise, mineral acids and quinine are advocated. Soda water is given for obstinate vomiting, or bismuth and laudanum. In convulsions wet compresses are used, which are cold and changed frequently.—*Med. Press and Circular.*

Osseous Deposit in Eye.—Mr. Arthur Bracey, of Birmingham (*British Med. Journal*), exhibited at the Pathological and Clinical Section of the Birmingham Branch, a specimen of bone found within a disorganized eye which he had excised. The deposit took the form of a cup, and occupied the whole of the inner surface of the choroid. Mr. Bracey stated that authors described similar formations as true bone.

Origin of Indican in the Urine.—Jaffe (*Transl. Centralblatt. für Med. Wissensch. for British Med. Journal*) finds that, after injection of indol subcutaneously, considerable quantities of indican appeared in the urine. It is thus apparently proved that at least part of the indican of the urine arises from the indol produced by the pancreatic digestion. The indol of the intestinal canal is chiefly eliminated by the fæces, to which it communicates their characteristic odor. Part is ab-

sorbed and becomes conjugated with sugar to form indican. If the excretion of indol by the intestine be prevented, as by obstruction of the intestine, then one would expect a larger quantity of indican in the urine. This Jaffa found to be the case in one instance of ileus.

Urea in Bile.—The *Zeitschr. für Chem.* (2), vii. p. 88, states that Popp discovers that urea is a constant constituent of bile. The bile of the ox contains it in less quantity than that of the pig.

Elimination of Alcohol by the Kidneys and Breath.—At a meeting of the Boston Society of Medical Sciences, Dr. Edes (*Boston Med. and Surg. Journal*), read a paper upon the elimination of alcohol by the kidneys and breath, as determined by the chromic acid test. He found that the elimination by the breath was the more constant and continued longest at its maximum; but that after large doses, which had a perceptible narcotic effect (40 c. c. of strong alcohol), the urine, for the first two hours, and more especially the first hour, excreted a considerably larger amount. After five or six hours, the amount already eliminated is very small (say 15 c. c. when 40 c. c. had been taken), and the rate has fallen so low that several weeks would be required to complete the removal from the system. With smaller doses (20 c. c. and 5 c. c.), the elimination by the kidneys is hardly perceptible, much less so than that by the breath. Lieben (*Annalen der Chemie und Pharmacie*, 7 Suppl. Band 1870) was able to collect from the urine of persons who had taken 22.5 c. c. of alcohol in the form of light wine less than 0.1 c. c. alcohol. It is probable that these results are much modified by the addition of other ingredients, as in wine or beer, by dilution, temperature, habit, or idiosyncrasy.

Paracentesis Thoracis. — Within six months, four cases have been tapped at St. George's Hospital, in neither of which was the air excluded, and they did well. Dr. Fuller considers the dread as to the admission of air fallacious, and says that the various ingenious instruments devised for that purpose only complicate a harmless operation. When the fluid is serous, he advises closure of the opening with carbolic plaster, as soon as the operation is finished; when purulent, the wound is to be kept open and drainage employed if necessary, and the patient well fed.—*Canada Lancet.*

The Bromide of Quinine in Syphilis.—Dr. David W. Yandell, of Louisville, Ky., (*Am. Practitioner*) has had the opportunity of verifying the observation of Dr. B. W. Richardson, in seven cases of syphilis, as to the usefulness of bromide of quinine where certain special and persistent symptoms follow upon this disorder. It was given in the form of a syrup made according to the formula of Dr. Richardson (*Am. Practitioner*, Sept. 1871). Since that time Dr. Thomas E. Jenkins, of Louisville, pharmaceutist, has prepared an elixir of the same strength, which he thinks possesses some advantages over the syrup.

A Novel Treatment of Hernia. — M. Demarquay has lately employed with success a novel method of treatment in a case of strangulated hernia, which resisted the taxis, viz, the evacuation of the contents of the intestine. The patient was a young man, aged 22, who came under M. Demarquay's care with a greatly distended congenital hernia. The taxis having been tried and proved unsuccessful, even with the aid of chloroform, M. Demarquay thrust a fine trocar into the centre of the swelling, and, by means of Potain's "Aspirator," removed between four and five ounces of fluid, besides gas. After removing the trocar, and waiting a few minutes to see whether the intestine became refilled, he again carefully applied the taxis, and easily returned the intestine into the abdomen. Small doses of opium were afterwards given. No symptoms supervened, beyond orchitis, in consequence of the pressure to which the testicle had been subjected. The patient recovered perfectly, and was exhibited by M. Demarquay to the Academy of Medicine a fortnight after the operation. M. Demarquay proposes the emptying of the intestine, in the manner described, in the following class of cases: 1, in all congenital herniæ; or in recent herniæ, which have become strangulated at the moment of their formation; 2, in old herniæ that have been reducible up to a few days before strangulation, and in large umbilical herniæ that have recently become strangulated. The operation must not be performed except at an early stage, before there is reason to believe that changes have taken place in the intestine, rendering it incapable of resuming its functions.—*Br. Med. Journal.*

A Case of Human Hermaphroditism is reported by Dr. C. L. Heppner, of St. Petersburg, in the *Archiv für Anat. und Physiol.*, a translation of which, with woodcuts, is to be found in the *Gaz. Méd. de Paris* of June 15th. The specimen, which is in the Museum of the Foundling Hospital of St. Petersburg, shows a penis with prostate and testis; and has also a uterus, Fallopian tubes, and ovaries.

Inherited Syphilis.—Dr. A. D. Hall, London Correspondent of the *Phila. Med. Times*, in a conversation with Mr. Jonathan Hutchinson upon the external characteristics of inherited syphilis, referred to a peculiar appearance of the temples in these cases. It consists of a furrow or excavation in the space between the tygomatic arch and the superciliary ridge of the orbit. It was well borne out by a number of cases seen at the Royal London Ophthalmic Hospital on that special occasion. He referred to the great frequency with which syphilis was seen at the hospital.

Extraction of Cataract.—In extraction of cataract Mr. Streatfield, of the Royal London Ophthalmic Hospital, uses the subjoined method of incision peculiar to himself: Introducing a Beer's knife almost perpendicularly into the cornea at its sclerotic junction, he skirts along the edge of the anterior chamber until he has made a sufficient opening for the escape of the lens. The after-steps of the operation do not differ from those in common use. He prefers the Beer's knife for iridectomy, or for any operation to open the cornea. He does not like the keratome; his objection to it is that it is essentially a blunt instrument, that has to be forced into the cornea.—Lond. Corresp. *Phila. Med. Times.*

Nux Vomica in Dyspepsia.—J. E. Nichols, M.D., Osage, Iowa (*Chicago Medical Journal*), states that in this affection his main reliance is nux vomica in small tonic doses. If there is little or no trouble beyond the stomach he gives:—℞. Fl. ext. nux vom., ʒ iij.; Alcohol, ʒ vj. M. Sig. Five drops in a little water before each meal.

If there is some irregularity of the bowels, with the pain of epigastrium around to the right hypochondrium, he combines the mandrake as follows:—℞. Fl. ext. nux vom., Fl. ext. mandrake, Alcohol, āā ʒ iij. M. Sig. as the other.

Where there is much complaint of wakefulness at night, horrid dreams, etc., he gives in addition to the foregoing: ℞. Iodide potassium, ʒ ss.; Chlorate potassium, Carbonate potassium, āā ʒ j. M. Ft. pulv. div. in

chart. xx. Sig. One in half a glass of warm milk each night at bedtime.

If, as is often the case, a large portion of the day witnessed pain in the head, throbbing in the temples, he administers bromide of potassium and syrup for a morning potion, as soon as the patient awakes. Sometimes gelseminum is combined, thus: ℞. Fl. ext. nux vom., Fl. ext. mandrake, Fl. ext. gelseminum, āā ʒ iij. M. Sig. as the others.

In cases of troublesome nausea, heartburn, acrid or fetid eructations, after eating, he uses phosphate of lime rubbed up with loaf sugar; or, in place of this: ℞. Syr. amanti, ʒ vj.; Arom. sul. acid, ʒ ij. M. Sig. Teaspoonful an hour after each meal, or whenever the eructations are troublesome.

Treatment of Goitre.—Th. Sittell, M.D., of Cincinnati (*The Clinic*), recently had a patient with goitre, which measured when first seen 21¼ inches in circumference. The treatment was adopted as recommended by Lücke, which consists in the injection into the tumor of the tincture of iodine. Within three months eleven injections were made into its parenchyma—in from 10 to 25 drop doses—which reduced the tumor four and one-fifth inches; and its steady and constant decrease was evidence of the efficacy of treatment, and promised future perfect success. The digital compression after removal of the syringe and the closure of the wound of penetration by adhesive plaster as recommended by Lücke were always observed. The suggestion, too, was adopted of permitting the needle to remain in the tumor while the body of the syringe was withdrawn to be refilled that there might be the least possible danger of injecting the iodine into a minute vein. The almost entire absence of local reaction was probably due to the fact that cold dressings were always applied to the surface after each injection.

The Employment of Electricity in Labor.—*The Bulletin Gén. de Thérap.*, March 30, 1872, has an able thesis entitled "De l'électricité appliqué à l'art des accouchements," by Dr. Tachard, Externe de la Maternité, etc., Paris. He gives the results of the experiments of M. de Saint Germain Tachard; then follow the nineteen observations collected by the author, cases taken from the inmates of the Maternité indiscriminately. His deductions were as follows:—1st. In no case were uterine contractions induced where they had not previously been manifested spontaneously. 2d. In every instance in which labor had commenced and the pains had progressed regularly and periodically, whenever the two poles were applied at the lumbar region in a very short time the manifestation of a new activity in the contractions and shorter periods of interval were noticed. 3d. All the contractions produced or provoked by electricity were much longer and much more painful than the contractions of spontaneous origin. 4th. The dilatation of the os always seemed to increase with rapidity. 5th. In all the cases hitherto observed the expulsion of the placenta followed immediately upon expulsion of the child. 6th. In no case did the child suffer in any way from the electric action. The same could be said for the mother.

Hydrate of Chloral.—Dr. Charles W. Parsons, of Providence, R. I., in a reprint from "Communications of Rhode Island Medical Society," gives some interesting observations concerning the administration of this remedy which is finding its true status in the advanced materia medica.

Polypus of the Rectum.—At a recent meeting of the *Journal of the Gynæcological Society* of Boston, Dr. Martin presented an unusual specimen of the rare affection, polypus of the rectum, which was removed from a patient who desired the removal of hæmorrhoids. It was about one inch and a half in length, and one in width at its widest portion, and attached above the sphincter.

Fœtal Hypertrophy on the Western Coast.—Dr. Storer (*Journ. Gynæcological Soc.*) says that there exists not only a tendency to hypertrophy in the productions of the vegetable world, and to precocity in the development of animal life, but also a tendency to fœtal hypertrophy, on the Western coast. As is well known, the average weight of male infants, at birth, in our own region, and in most parts of Europe, is from six and a half to seven pounds; while the average of females was perhaps a pound less. In the eastern section of our country instances of children weighing from ten to a dozen pounds at birth are very exceptional. In California, on the other hand, Eastern women, who at home have born small children, often bring forth enormous ones, which live, and the mothers seem but seldom to suffer materially in consequence. Dr. Favor, of California, writes as follows to Dr. Storer: "I delivered a woman, with the forceps, of a living child, which weighed thirty-six hours after birth, lightly clad, fifteen and a quarter pounds."

Astigmatism.—A new method of discovering and correcting astigmatism is detailed by Cyrus H. Farley, M.D., of Portland, Maine, in the *Boston Medical and Surgical Journal* of June 13th.

Popliteal Aneurism Cured by Compression.—A case of this character, under the care of Dr. D. Hayes Agnew, of Phila. (*Phila. Med. Times*), was cured by Pellingham's compressor and digital compression within forty-four hours; by the former mode twenty-three hours, and the latter twenty-one. Digital pressure was made at the point where the artery passes over the pubes, but not firmly enough to cut off all blood, a very small portion being allowed to pass under the fingers. The patient, an Irishman by birth, a watchman by occupation, and sixty years of age, was very little—scarcely at all—depressed by its use, notwithstanding the irritated condition of his thigh, the upper portion of which necessarily had to be encroached upon in changing hands. Each assistant of the seventeen was able to press for half an hour before being relieved.

Xylol in Small-Pox.—Dr. Richard Moffett, of Phila. (*Phila. Med. Times*), gave the following prescription to a patient with confluent small-pox, with a happy effect: ℞. Olei xylol, gtt. cc.; Pulv. acaciæ, q. s.; Syrupi simplic., Aquæ, āā f. ʒ j. S. A teaspoonful every two hours. He has tried this remedy in a number of cases since, and its use has always been attended with good results.

The Prevention of Pitting in Variola.—Dr. Alonzo L. Leach, of Phila. (*Phila. Med. Times*), wishes to call the attention to the carbonate of lead, the ordinary whitelead of the paint-shops, which he has used in several cases of confluent variola with great success. His mode of using it is to add to the paint a sufficient quantity of linseed-oil to make it of the consistence of rich cream, and then, by means of a camel's-hair pencil, apply it to the face. This he has done in the vesicular stage of the eruption, but perhaps it might be well to use it even earlier—in the papular stage. A few applications form a complete covering to the face, at once excluding all possible access of air or light. It is soothing to the parts, allaying irritation, and quieting inflammation, and in those cases where he has used it, it has been effectual in preventing the pitting. It commends

it-self from its easy mode of application, its cheapness, the readiness with which it is obtained, and from the fact that it disposes of the dark room so religiously observed by many practitioners, and that a few applications render all future interference unnecessary.

He adds that for the delirium of the disease the bromide of calcium is of signal benefit. All of the bromides would be equally serviceable, but that of calcium, containing a larger per cent. of bromine, is more decided in its action.

Indigestion and its Management.—Dr. Bradford S. Thompson, N. Y. (*Am. Practitioner*, July, 1872), in his paper on this subject, alludes to a case under his observation where everything appeared to the patient double; in another every object seemed inverted; and in another, total blindness came on which continued for twenty-one hours. The latter patient, a conch-woman, of Key West, Florida, aged 47, was in the habit of eating prodigiously of a salad made from the indigestible conch, which abounds in that latitude.

In the indigestion of childhood the use of Boudault's pepsin wine can be highly recommended. This is prepared from pure pepsin, according to the formula of Dr. Corvisart, and is very palatable. Each dose possesses fully the digestive power of fifteen grains of the powder. This preparation, he states with much confidence, is superior to all other preparations of pepsin in use. It should be given immediately before a meal.

In regulating the diet, the author would impress upon the patient the necessity of observing the subjoined rules: 1st. Enjoin frequent and regular eating in the majority of cases. It was a remark of Sir William Temple, "that the stomach is like a schoolboy; if idle, always in mischief." The deduction drawn from this is to keep the stomach moderately employed. 2d. Let the diet be simple, always consisting exclusively of one article. 3d. Drink little or nothing while eating. 4th. Exercise should not be permitted directly after eating. In many cases a voracious appetite attends this affection; but in the majority of cases there is very little inclination to eat; and under these circumstances it will not be amiss to attend to the following particulars for the purpose of exciting the appetite: Do not let the patient know what he is to eat. The food should always be cold; when hot the odor will often destroy the appetite. The dishes should always be small; for nothing is more distressing to a patient with a delicate stomach than a large dish of meat placed before him. These circumstances, though apparently trivial in their character, are very important, and deserve recollection.

Inaction of Strychnia Administered Hypodermically.—Dr. Thomas Kennard, of St. Louis, Mo. (*The Med. Archives*), finds, from much experience, that this remedy used hypodermically is remarkably inactive, and he is inclined to believe that it acts very feebly, if at all, when employed in this manner; nor has it ever caused, in his cases, any sensation of heat or smarting or other local disturbance spoken of by Dr. Bartholow, in his work on "Hypodermic Medication." He says that strychnia must act differently in Cincinnati from what it does in St. Louis, and that Dr. Bartholow's account of its alarming effects is not calculated to make many enthusiasts in its use.

So far he has not witnessed any particular effect from its hypodermic use, although Echeverria, Hunter, Courty, Bartholow, Anstie, and others state that it acts much more powerfully, promptly, and satisfactorily this way than by the stomach.

Nocturnal Enuresis and Spermatic Incontinence.—Dr. Campbell Black, of Edinburgh, Scotland (*British Medical Journal*), claims that camphor, opium, belladonna, or hyoscyamus, with the tincture of the muriate of iron, are not inferior in their influence over the bladder to any preparations in the pharmacopœia. But it is indispensable that the tincture of steel be given much in excess of the usual dose. He was consulted by a medical student, aged 17, who was much annoyed by the very frequent occurrence of seminal emissions, and the following was prescribed: ℞. Pulv. camphoræ, gr. xviij.; Pulv. opii, gr. xij.; Ext. hyoscyami, grs. ut fiat massa, et divide in pilulos xij. One pill was ordered to be taken at bedtime; and forty minims of tincture of steel to be taken thrice daily in a wine-glassful of water. Ten days afterwards the patient called upon him, with the annoyance removed.

Organic Dynamics.—Dr. S. P. Breed, of Princeton, Ill. (*Med. Examiner*), at the meeting of the Illinois State Medical Society, read a lengthy report on the subject of "Organic Dynamics," referring more particularly to the cerebro-spinal and organic systems of nerves.

He claimed that all dynamic force originated in the organic cells; that the cells of vegetable organization receive and correlate the caloric, light, and electricity into organic force; and that the nerve-cells derive their force from the vegetable cells. The nerve-cells were likened to galvanic batteries, and the nervous cords to the conducting wires. It was stated that every difference of function implied a difference in structure, that no two cells were alike, or that the cells of the brain of no two individuals of the same family or species were alike; and, consequently, they could not think alike.

It was claimed by the writer that cells, while developing, absorbed force, and gave it out only in the process of dissolution. The highest type of cell-development was the *ideational* cells of the cerebrum, which in their dissolution evolve the phenomena of mind. The report closed with the detail of some cases intended by the writer as illustrations of his theories.

Extraction Operations.—The *Phila. Med. Times*' London Correspondent alludes to Mr. Liebreich's new extraction operations. In the two operations which he witnessed the operator used no anæsthetic, no speculum, no assistant to hold the upper lid, nor any fixation-forceps; and all his instruments for the operation were contained in one handle. At one end was the narrow Graefe knife, at the other the David spoon, whilst the cystotome, by means of a button, could be protruded or retracted at pleasure. His hand is so tremulous that it is almost painful to see him operate; and yet he operates well.

Alterations of the Kidneys in Hydrophobia.—Prof. Rudnew believes that in this affection there is an advanced degree of parenchymatous inflammation of the kidneys with this peculiarity, that the epithelium of the uriniferous tubules is cast off throughout the whole extent of the organ, both in the cortical and medullary substance. This lesion is characterized in the later periods by degeneration and complete disappearance of the epithelium, which fill the tubules in the form of fatty, granular matter. The author failed in none of his autopsies to discover these lesions, and believes that in the advanced stage death is imminent. Remarking the similarity which exists between these appearances and those observed in the human subject which are productive of uræmia, he suggests that the symptoms observed during the life of the affected animal may be uræmic in their origin.—*Lyon Médical.*

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THE HYGIENE OF RURALIZING.

THERE is probably no more important advice which the physician is called upon to give than that which refers either to a temporary or permanent change of residence. We are willing to allow that in the majority of instances he is ordinarily careful in selecting a suitable climate; that he weighs all the chances *pro* and *con* for the improvement of his patient; but when the case does not appear to be to him an important one, he is too apt to grow careless and to allow every possible construction to be put upon the stereotyped recommendation, "Go to the country," etc. This is especially so when it may apply to families who desire to combine pleasure with the chances of gaining rest and invigoration in some of the many rural retreats. One of the natural consequences of this is, a general understanding on the part of the people that a visit to the country during the summer months is all that is required of them to retain health on the one hand, or to regain it on the other. So far as all the indications are followed out, so far as all the necessary means are used to the end desired, the practice of ruralizing is beneficial. That the people themselves, however, are not the proper judges of their wants in this particular, becomes more and more evident. The time has come to look at the strictly hygienic aspects of the system as at present carried on, with a view of impressing upon the community their real wants as health-seekers.

We need not refer in this connection to the possibility of health, comfort, or pleasure in the so-called fashionable hotel of the watering-places or mountain districts. The manner in which these establishments are conducted makes even the pretention to being health-retreats an effrontery to ordinary common sense. Constructed for the sole purpose of money-making, every effort is made to pack away transient visitors, or such as may not wish to spend large sums for better accommodations, into small and ill-ventilated apartments; and generally speaking, the excitement attending the life in such a place, the fashionable struggle with dress and other conventional proprieties, the late hours, the noisy meal, and all the other disagreeable attendants of hotel-life, are calculated for everything but sanitary requirements.

The antipodes of the hotels are the farm-houses, so many of which are opened for summer boarders. Very few of these, however, serve the purposes for which they are so enticingly advertised. If a model farm-house can be obtained, it is no doubt the most desirable place for abstract ruralizing. But that this is exceedingly difficult, the experience of the majority of comfort-seeking country-boarders abundantly proves. It is very difficult to find quiet accommodations of this sort, with pleasant surroundings and the requisite quality of food. The model and civilized farmer who for his own sake lives comfortably, and looks beyond the the salt meats and other heavy food that suits the digestion of his ploughman, does not usually open his door to accommodate transient boarders. On the other hand, the farmer who from lack of thrift, management, and knowledge of his business cannot live as comfortably as he may desire, is very apt to make some arrangements for city visitors during the summer. This class of boarding-house keepers are in such a large majority, that they may be looked upon as typical of the whole class. As such rarely have the means of supplying the requisite food for their own families, they oftener fail to appreciate the ordinary wants of others, even allowing the widest charity of construction for what they choose to call "plain and substantial food."

A compromise between the two classes of farm boarding-houses is the ordinary country house kept by some experienced person—generally "a lady in reduced circumstances." It is such as make country boarding a business, and when they do not crowd their houses, they are very apt to give satisfaction; and it is to such, that patients who have ordinary digestions, and ordinary capacity for quiet, should be recommended.

The retirement to the country-seat on the river bank, the mountain side, or the sea-shore is a luxury only for the wealthy. The real benefits of such a place are very often counterbalanced, however, by too oft-repeated trips by rail or steamboat to town. This practice is in fact the bane of the whole system of ruralizing, and in the vast majority of cases the evils attending the constant travel to and fro, more than counterbalance the strictly hygienic influence of a residence out of town. The American people have been often ridiculed as a nation of restless travellers; in fact, one statistician has assumed that four-fifths of our population spend the greater part of their lives either on our steamboats or in our rail-carriages. There is no doubting the fact that such a statement is much exaggerated, but we must allow that the peculiar temperament of the people,

influenced as much by our changes in climate as the sociable element of character tends to make them a migratory race. This characteristic is especially marked during the summer months, when all the ordinary rules of hygiene are put at defiance under the delusive hope that the means justify the end. It matters not if the family are at the fashionable hotel, the farm-house, or the country-seat, the aim of *paterfamilias* is to have such stopping-place within an easy reach of his shop or office. The natural result of this is, that he ordinarily makes his arrangements to spend each night with his family. To do this he not unfrequently travels from twenty to forty, and not unfrequently sixty miles a day, mostly by rail. The peculiarly exhausting effects of such journeys is well known and well appreciated by such as have coaxed themselves to submit to them.

There are many elements which conspire to make this mode of travel more prevalent,—the establishment of new lines in the neighborhood of great cities, the increase of the number of trains on the old lines, the enticing improvements in our suburban retreats, the decrease in expense of a temporary residence out of town, the conventional understanding that it is fashionable, and lastly, the great excuse that health is promoted thereby. The present returns of the railroad companies, as compared with those of past years, prove the increase of "commuters" with as much certainty as figures can, while the comparatively rapid growth of all the accessible country-places give an equally unmistakable evidence of a very wide-spread delusion. The hygiene of the railcar is a subject of itself which in its bearings upon our community deserves very thorough investigation. An occasional ride for a short distance in these coaches may be looked upon as a pleasant excitable pastime, giving new sensations to mind and body; but when it becomes a forced practice, the very opposite is the rule. The constant jar has perhaps the most deleterious effect upon the traveller, causing an indescribable irritation to the nervous system, culminating either in headaches of greater or less severity, or in a state of somnolency the direct result of exhaustion of the whole nervous system. If we add to this the rumbling and rattling of the train, we have still another very potent element of nervous irritation in the beginning, and nervous exhaustion in the end. It has been repeatedly observed that these effects are by no means transient. Not unfrequently the exhaustion after an ordinary ride becomes so great that it requires hours of perfect quiet to restore the equilibrium of nerve and temper. This feeling is by no means a strange one to such as come from the country to business in the morning, and return to the country in the evening.

A few years ago the *Lancet* made a thorough investigation into the effects of constant railroad travel upon the health, and arrived at the conclusion that it was in every way conducive to nervous diseases of every grade which the peculiar susceptibility of the individual might invite. Among the graver forms of these diseases, paralysis and softening of the brain took a prominent position. The experience in our own country has borne out the truth of these statements as far as railroad employés are concerned, and it would be exceedingly interesting to determine, approximately at least, what relation the increase of nervous troubles bears to the rail travel.

We are, at least, warranted in saying, that frequent travelling by rail is deleterious to health, and as such should be discouraged, especially among those who would believe that it should be one of the means used to promote health. The steamboat, although more tedious, and in the main less objectionable, must be accepted as the condition which constant travel must accept. We may not expect to effectually stem the tide in regard to ruralizing as at present carried on; but when the question of health is connected with it, we have the privilege of expressing an opinion. It is obvious that if health and comfort are to be gained by a temporary residence out of town, it is of primary importance to select a healthy spot where nourishing food can be obtained with comfortable quarters, and to avoid too frequent travel, the rack and annoyance of the latter being especially calculated to frustrate the best of intentions of physicians and patients.

The Health Board and Nuisances.

The war waged by the Health Board against the fat-rendering establishments on the west shore of our city has been virtually unproductive of any good results. Notwithstanding injunctions, judgments, and the like, these powerful corporations still carry on their disgusting trade, and taint the atmosphere of a wide and populous district with the foulest of odors. The time must come, however, when these establishments shall either be constructed so as to do away entirely with all the objectionable features of their operations, or be compelled to remove to some isolated spot where the employés alone can enjoy the full benefits of what they claim to be a perfectly healthy atmosphere when one "gets used to it." The residents of the districts in question have become justly indignant, and are naturally looking to the Board for explanations. It would appear that there have been plenty of reports from special committees, but the people are very properly becoming impatient, if not distrustful of the department. We are surprised that the medical and other of the politicians in the Board are so slow to acknowledge that there is such an excellent opportunity for vindicating its real utility in this time of emergency. We have some reason for congratulation, however, in another direction, viz., the passage of an ordinance to the effect that after the first of September next the contents of house-vaults shall be removed and transported by means of an air-tight apparatus, thus doing away with the necessity of having such vaults emptied at night, with all the

attendant inconveniences and annoyances. This plan has been adopted throughout Europe, and has worked to the satisfaction of all parties concerned. It is to be hoped that the Board will prove itself equal to the task of initiating this reform hardly less radical and beneficial than that of abolishing cushions from street cars.

Reviews and Notices of Books.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC. By THOMAS WATSON, Bart., M.D. From the Fifth revised and enlarged English Ed. Edited, with additions and numerous illustrations, by HENRY HARTSHORNE, M.D. Philadelphia: H. C. Lea. 1872.

AFTER the lapse of a number of years since the appearance of the fourth edition of these admirable lectures, which were published in 1857, the profession was agreeably surprised at the announcement of a fifth edition, thoroughly revised by their author. Taking into consideration his advanced age, and the material reconstruction which it was thought necessary the book should undergo in order to render it an acceptable work for the day, it is not surprising that it was looked for both with interest and curiosity. When we think of the wonderful advances recently made in pathology, and of the entire revolution in the system of treatment now adopted from that which was inculcated in the earlier editions of these lectures, we can readily admit that under the circumstances there was reason for this curiosity. Then, again, when we consider the acknowledged position of the author, of his painstaking accuracy and thoroughness, and of the conscientious manner in which he always did his work, we could hardly think that he would at this day put forward a work which would be a discredit to himself and a disappointment to his large number of readers. Considering all things, particularly the large amount of work involved in getting out this edition, we must express our surprise that the author has been able, in his old age, amid the innumerable duties which devolve upon him, to bring out an edition which is really of so much value as the present one. In looking carefully through the work, and in comparing it with the previous edition, we notice new passages here, modifications of old views there, qualifications of previous opinions there, in fact nearly through the entire book do we find evidences of the master's hand. We almost unconsciously find ourselves reading descriptions of diseases which years ago we read with so much pleasure and profit, and then, almost imperceptibly, we are led to portions treating of doctrinal and theoretical matters, and we are here charmed by the clearness, calmness, and terseness of the reasoning. In fact, we can safely say that the pleasures once experienced in reading Watson's charming lectures as students are intensified in reading them in maturer years after their having received the finishing touches of their author.

At the very outset we find that revision has begun, and in that incomparable first lecture, which treats of the general outline of the study and of the duties of the physician, we find much amplification. In this the author distinctly draws the difference between the principles and practice of medicine, and shows us how far he is able to teach us the one, and how necessary it is for us to practically learn the other. Indeed we have not met with any reading more calculated to induce a healthy state of the medical mind than is to be found in the author's advice to those beginning their studies. The advantages and necessities of hospital training are admirably put forward, and the author shows very clearly how necessary is a thorough knowledge of anatomy and physiology. The author's remarks upon health and disease are so sensible and so plainly stated, that we advise all to read them attentively; indeed we think that no one can afford to pass over this inimitable introductory lecture, for by its perusal we are certainly made wiser and better men, so pure is its tone and so practical is its advice. The second, third, and fourth lectures are, as before, devoted to the principles of general pathology; and although they have not been materially altered, they are not by any means noticeable by any shortcomings even in the light of our advanced ideas.

That excellent lecture which treats of the various modes of death, we are pleased to find, has been quite fully rewritten, especially in the part treating of apnœa; and here we find an admirable account of death by thrombosis and embolism of the pulmonary artery. The chapter on the causes of disease has not been materially changed, but still is admirable in itself, while that one treating of symptoms can always be consulted with profit. We looked with some curiosity over the lecture devoted to inflammation, being anxious to find our author's opinions of recent views, but as we find he has not adopted them, we are led to the conclusion that he regards them still as *sub judice;* this lack, however, is no detriment to our mind to the merits of the book. The lectures upon diseases of the eye have been left out in this edition. Among the lectures which have been most fully reconstructed are those upon diseases of the nervous system. These may be said to be in the main fully up to the standard of modern research, and we are pleased to see that nearly all recent authors have been consulted. The chapter on aphasia is certainly one of the most lucid and terse in the book, and contains all that is known about that curious disease. The author discusses the various theories as to its production with the calmness and clearness peculiar to him; we should advise every one to read this incomparable lecture. The lecture upon apoplexy, with the few remarks on sunstroke, is somewhat enlarged, and is admirably clear and comprehensive. In treating of epilepsy—and, by the way, the author's description of the trouble is one of the most graphic pieces of word-painting in medical literature—we find that he in this edition admits that anæmia of the brain is a cause of the paroxysms, instead of adhering to the old view of cerebral plethora, and he shows the influence of the contractility of the muscular coat of the smaller arteries in producing these phenomena. Indeed this contractile power of the arteries is fully dwelt on in the description of the various diseases in which it is called in play. We have already seen its influence on the pulmonary arteries in the production of apnœa, and Sir Thomas, in treating of cholera, graphically shows what an important part it plays in that disease. The chapter on chorea has been very materially amplified, and may be considered fully up to the time; Dr. Watson's views as to its pathology are certainly clearly stated and seem quite feasible. He thinks that there is no permanent structural change, but that the phenomena are due to temporary obstruction to the cerebral circulation, probably caused by muscular spasm of arteries, and to minute emboli caused by particles of fibrine. We are somewhat disappointed that locomotor ataxia is not quite as fully described as it might be, and that the influence of and indication for the use of

galvanism in this and other nervous diseases is not clearly brought out.

Dr. Watson's views upon the subject of croup will no doubt attract considerable attention. He describes 1st, spasmodic croup, or laryngismus stridulus; 2d, an inflammatory croup, which is merely an acute catarrh of the larynx; 3d, diphtheritic croup in which false membrane is found, and whenever that is found he pronounces the case one of diphtheria; thus he considers diphtheria and our membranous croup as the same affection—a view which is at variance with that of many Continental and American observers.

The general subject of thoracic diseases, which is treated of at the commencement of the second volume, is in the main well handled and is fully up to the time. All the recent views upon phthisis are clearly and admirably given, and the clinical history remains as before, a model of accurate description. In speaking of the treatment of pleurisy we think that our author does not do full justice to paracentesis as an efficient means of relief in many cases.

The lecture on cholera has been very largely augmented and revised, and we are somewhat surprised that the author has adopted Dr. George Johnson's elimination theory, and upon it recommends that gentleman's line of treatment. The chapters relating to continued fevers have been somewhat enlarged, and we find that Dr. Watson adopts the view of Dr. Budd as to the specific nature of such fever-poison. This part of the work is especially worthy of perusal. The chapters on the exanthemata and upon skin-diseases are much the same as in earlier editions.

In a short and charmingly written epilogue the author speaks of the anachronisms which have of necessity crept into the book, he pays a graceful compliment to the ability of Dr. George Johnson, and expresses his regret that his last performance is not better than it really is. All things considered, we must express our decided opinion that the Watson of to-day will be largely read by new readers, and that it will be reread by those who have read it before, both with profit and pleasure. Before closing we would call attention to the modified views of Sir Thomas as to the value of blood-letting, and we think that his calm clear statement of its advantages in some cases should be carefully weighed by the profession, particularly as it is a procedure which, when carefully used, is productive of much real benefit, and as it has recently fallen into disuse.

In bringing out the American edition of these lectures, the publisher has deemed it expedient to employ the services of an editor, who has as usual added many notes. It is a matter of congratulation to the profession that the notes of the former editor are nearly all left out, and that those of the present editor are in general more practical and acceptable; but in his annotations we think he has given undue prominence to the observations of Philadelphian physicians, to the exclusion of other observers which are equally as valuable, if not in many cases more so. We think that the propriety of intercalating many of the illustrations, particularly as they are not accompanied by explanatory text, to be at least questionable. We must confess to an aversion to the growing tendency of American physicians to edit foreign works, and to deluge them with voluminous, and in many instances superfluous, notes. The truth is, that many of these "editors" merely play the part of proof-readers, and in that capacity their efforts will soon meet that want of appreciation which they justly deserve. They fail to see that they make more reputation by one well-reported original case, or one well worked-out observation, than they do from editing a score of books. At best this system of editing only gives a very specious reputation.

The present edition of Watson is in two volumes, which are very fairly printed on good paper.

A System of Surgery; Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., LL.D., D.C.L. (Oxon.), Professor of Surgery in the Jefferson Medical College, of Phila., etc., etc. Illustrated by upwards of fourteen hundred engravings. Fifth Edition. In 2 vols. 8vo, pp. 1098 and 1170. H. C. Lea. Philadelphia, 1872.

The appearance of the fifth edition of any work is in itself an acknowledgment of the appreciation of the particular public to which it may appeal. Prof. Gross's treatise is in this particular no exception to the general rule. It would be unnecessary to go into any extended notice of the treatise before us, even if it were possible, short of occupying a number of pages. If we were to compare it with the first edition in 1859 it would almost appear as a different work, so extensive have been the additions, so radical have been the changes, so modified are many of the views in regard to some of the principles of the art, and so many and important have been the additions made. A great deal of space is devoted to the subject of inflammation and its multifarious dependencies; but it is made more than ordinarily interesting by the manner in which it is treated, and by the practical turn given to the chapter. The chapter on tumors is full of interesting facts, and the divisions of the different growths and the respective descriptions are in accordance with the advanced views of the German pathologists. Syphilis is very extensively treated in chapter ix. The descriptions of the different varieties are strictly clinical and the treatment rational. Believing, with the advanced syphilographers, that when syphilis is once confirmed as secondary or tertiary, a radical cure is at least improbable, he is no advocate of syphilization. His view of this particular plan of treatment is, in our opinion, a very proper one, viz. that despite the good effects claimed for it by Boeck and others, it is too disgusting, too repugnant even to a syphilitic patient, to warrant its general countenance, and that the explanation of its good effects is to be found, according to Lee, of London, and Lindwurm, of Munich, in the depurative action of continuous suppuration. Wounds, in all their variety, receive a very careful consideration in chapter x., while railway injuries forms an article by itself, the author in the main adopting the views so well laid down by Erichsen in regard to the influences of minor injuries upon the nervous system. Naturally following this, is the chapter on the effects of injuries upon the nervous system.

The remarks on general diagnosis and on operative surgery are, perhaps, the most practical in either volume, and deserve the careful study of the young practitioner. The description of the various instruments used in surgery is sufficiently full, and quite extensively illustrated. Chapter xiii. takes up the important subject of amputations, and all the different approved methods are fully detailed and well illustrated. The excision of bones and joints follows, and then anæsthetics are considered. In this chapter a very fair exposé of the whole of this interesting subject is given, and the true relations of the different anæsthetics very distinctly made.

Part II. comprises special surgery, or diseases and injuries of particular organs, textures, and regions. This extends over a very wide range of subjects, the most important of which, perhaps, is that of diseases and injuries of the arteries, and aneurisms. Our author has evidently taken great pains with this part of the work,

and has succeeded to our mind in making his points clear, and giving the true significance and relative worth of the different methods of operation, not only in ligation of the special arteries, but the respective methods of treating the aneurisms of these various vessels. Following the diseases of the bony structures comes fractures, general and special, the consideration of which is, perhaps, full enough for a work on general surgery. The descriptions are clear, and will suffice as a guide for all the ordinary forms of these accidents usually met with. The same may be said of the dislocations, the remarks upon which open the second volume.

Chapter ii. of Vol. II. commences with the injuries and diseases of the head, following which we have, in succession, diseases and injuries of spinal cord, face, eye (containing some very interesting remarks on refraction and accommodation), ear, nose, air-passages, neck, chest, mouth, and throat. The description of the different forms of herniæ are very clear, and the methods of operating are described by one who fully appreciates the difficulties under which the novice may be placed when called upon by some emergency to prove the existence of the different layers.

It will not serve our purpose to refer even in a general way to the different subjects taken up throughout the second volume. Each will serve to make up the general character of a first-class work on surgery, a work which, from the time the first edition made its appearance, has maintained for itself a first-class reputation as an authoritative exposé of the science. The volumes are well printed, and although a great many of the traditional woodcuts, in the possession of Mr. Lea, the publisher, are plentifully scattered in the text, there are just enough of new illustrations to give a distinctive character to this part of the work, and to cause the reader to wish for more of the same sort. We remark thus, not that we love the old friendly woodcuts of our boyish days the less, but that we love new cuts more.

Lectures on Aural Catarrh; or, The Commonest Forms of Deafness and their Cure. By Peter Allen, M.D., Aural Surgeon to St. Mary's Hospital, etc. New York: Wm. Wood & Co., 1870. 12mo, pp. xv. and 278. Illustrated.

We are glad to see this admirable little work presented to us in an American edition. It forms one of the most reliable manuals upon Aural Catarrh that can be placed in the hands of the practitioner. The pathology of deafness as a result of catarrhal inflammation of the mucous membranes is lucidly explained, and a very fair estimate made of the capabilities of topical interference for relief.

Although the volume is hardly such a one as to be of much service to the accomplished aurist, inasmuch as it contains nothing with which he ought not to be familiar, it will be of immense service to the general practitioner, enabling him to treat the most ordinary cases of deafness with confidence, and to prevent the more serious ones from attaining that condition which eventually renders them insusceptible of amelioration even by the most intelligently directed efforts.

The author appears to have made an excellent modification of Politzer's air-douche, by which the stream of air is made to issue from an elastic nozzle pressed against the nostril, instead of from a hard tube placed within the nostril. Many patients find it hard to bear the pressure of the hard nozzle against the parts when the nostril is compressed upon it, and hence this modification will be a welcome one. We recognize no advantage, however, in applying the douche to both nostrils at a time, and would prefer a single nozzle to the double one adopted by Dr. Allen. With regard to the apparatus itself, our estimate of its advantageousness, in efficiency, ease of application, and so on, is founded upon satisfactory experience in a number of instances.

The volume is written in a pleasant, agreeable, and confident style. The principles enunciated are sound, though not novel; and the therapeutics such only as every aural surgeon can commend.

It is a work, then, admirably adapted to the requirements of general practice, and one which we especially recommend to the student in otology, and to the busy practitioner.

The style of page, type, and binding, and the character of the illustrations, reflect great credit on the enterprising publishers.

The Medical Register of New York and Vicinity, for the year commencing June 1, 1872. Published under the supervision of the Medico-Historical Society. A. E. M. Purdy, M.D., Editor, Vol. X. New York: William Wood & Co., 1872. 12mo, pp. 422.

This useful annual again makes its welcome appearance upon our table. We notice, among other improvements over the last volume, an additional registry of New Jersey and Connecticut, which, as far as we know to the contrary, is full and accurate. This extension of district over which the Medico-Historical Society has assumed control is significant of its future mission in regard to other States, and promises, with the exercise of the same zeal which has characterized its previous endeavors, to become the general register of the profession of America.

It is now the only recognized authority of its class, and conclusively proves what can be accomplished by a small band of sincere and earnest workers. The street and avenue directory is another valuable addition to the work, as well as the information concerning hack-fares, postal regulations, table of distances, and the like.

The editor, Dr. Purdy, seems specially fitted for the work, and too much credit cannot be given to him for an earnest of his intentions in regard to the present volume. His forethought in having the register of the names of physicians of New York and the vicinity on tinted paper, thus making it entirely distinct from the rest of the volume, and making it easy of reference without the necessity of searching through a number of pages, will certainly be appreciated.

The names and residences are correct in the main—we might say *absolutely* correct except for an oversight in reference to our own address, which is half a mile out of the way. If this is the penalty of accuracy throughout the rest of the work, we gladly submit.

Doctor in Medicine, and other Papers on Professional Subjects. By Stephen Smith. New York: W. Wood & Co., 1870. 12mo, pp. 308.

This little book is made up of a series of short papers on professional subjects, referring mainly to matters connected with ethics and medical education. The majority, if not all of the papers, have appeared as editorial articles in the *American Medical Times*, of which our author was the Senior Editor. They are well and forcibly written, and are in keeping with the advanced views of the day.

The Heat has been so intense of late in the Northwestern provinces of India that it was impossible for a European to leave the house after nine o'clock in the morning, while the birds took refuge in the houses.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 12, 1872.

Dr. A. L. Loomis, President, in the Chair.

SCARLATINOUS NEPHRITIS.

Dr. Putnam exhibited the kidneys of a child aged five years, a patient of the Nursery and Child's Hospital, Staten Island. A week ago last Saturday the little one was attacked with general anasarca; but being in charge of a family out of the village, no particular attention was paid to the condition. On the Sunday following it attended church, and it was not seen by any physician until the Tuesday following, when the anasarca was extremely marked and generalized. There was, moreover, a pulmonary œdema, with dulness on percussion, dyspnœa, respiration forty, with considerable anxiety; râles at the bases of both lungs. No examination was made for albuminuria until Thursday, when it was discovered. On Friday all the symptoms so markedly improved, that on Saturday convalescence seemed to have commenced. This favorable condition lasted only until the day following, when the anasarca, dyspnœa, and albuminuria again increased; and death finally occurred on Monday morning. Dr. P. had not seen the child during the attack, and it was impossible, from any account which could be obtained from the attendants, to ascertain if at any time there had been any scarlatinous eruption.

At the autopsy there was found sero-sanguinolent effusion in the pleura and in the pericardium. The lungs were extremely œdematous. The kidneys were both much diseased; but the noticeable feature in connection with them was the difference in the degree of the lesion which they both presented in common. In the right kidney the pyramids were injected moderately, and the cortical substance was of a yellowish-white appearance, evidently the fatty degeneration of catarrhal nephritis. In the left kidney, however, the cortical substance was very much less altered, while the pyramids were intensely injected. It seemed to her that this point was interesting, as implying that the disease at first attacked, perhaps exclusively, the right kidney, and had given rise to the first symptoms of general anasarca, which were subsiding when the other kidney was attacked, giving rise to the fatal œdema. Blood was not only effused in the pleura and pericardium, but was seen in ecchymoses of the liver.

In view of the symptoms, and the post-mortem lesions, it was a matter of interest to ask the question, how far such cases may be considered idiopathic affections of the kidney (acute nephritis); or how far we are to infer the existence of scarlatina, in the absence of any more positive information than can be ordinarily obtained under the circumstances of the present case. In answer to a question, she stated that there were no cases of scarlatina in the neighborhood.

Dr. Janeway would not be certain of calling it scarlatina unless there were some cases of the fever in the neighborhood. There were, however, other matters to be taken into consideration in making the diagnosis, when the case is seen during life. He referred to one in point: the child was supposed to have been sunstruck; but on discovering that the temperature was 105°, he ventured the diagnosis of scarlatina. In the course of twelve hours the child died. Within a month after, two of the children of the same family were attacked with the fever and gave the characteristic eruption.

Dr. Flint saw a case, some years ago, of acute nephritis, with recovery, in a woman who had had scarlet fever in youth. She had had, however, prior to the attack of nephritis, scarlet fever in her family, and was very much confined to the apartments of the children.

Dr. Janeway referred to a case of a young man who, having had scarlet fever in youth, suffered from a severe sore throat, attended with albuminuria. In due course of time the younger members of the family had scarlet fever, with the characteristic eruption.

Dr. Jacobi should believe, without meaning to be quite positive, that the kidneys in question were examples of scarlatinous nephritis, rather than genuine nephritis. If there had been time to have made a closer examination it would have been of importance to have seen the surface of the uriniferous canals, to ascertain how much they were denuded; or, if there had been any urine in the bladder, to have examined it for epithelium. The reasons for such examinations would be found in that nephritis, after scarlet fever, is most frequently of a desquamative character, and very often the congestion and general redness are the results of the obstruction of the uriniferous canals with masses of this desquamated epithelium. Again, as a rule, acute nephritis, when it is double, strikes but once and affects both kidneys alike, while in scarlatinous nephritis they are not unfrequently attacked one after the other. Acute nephritis will generally show more positive symptoms of uræmia than has been the case in question. In this case there were no symptoms belonging to the brain until the last few hours.

As he had often remarked before, the ecchymoses in the liver were of little pathological importance, proving only that the liver-tissue had a comparatively small resisting power to the congestions of the organ in the last hours of life.

PSAMMONEA.

Dr. Thomson exhibited a part of the cerebellum taken from a patient, with the following interesting, if not curious history: The specimen was removed from a gentleman whose age was fifty-seven, and who had enjoyed measurably good health, with the exception of recurrent attacks of gout, one of which, more than ordinarily severe, he had about eight months before his last illness. In the last week of last December he began to feel very much dejected, which was quite unusual with him, and his wife could not elicit from him the cause. On the second of January, as he seemed to be very much cast down, she asked him repeatedly whether he would not tell her the cause, reproaching him at the same time for his want of confidence in her. He then informed her that he was ruined in business, and that the firm with which he was connected was in great pecuniary embarrassment. She endeavored to cheer him up, and sent for his partners to come and see him. They advised him to remain quiet for a while, and assured him that there was no reason for any concern. On the day following the patient was taken with a sudden rigor, and I was sent for; that was on January 4. I found him sitting in an arm-chair, with a suffused countenance; the eyes slightly injected, the pupils dilated; and while talking to him he became rather rigid, extended his hands and clasped them, and had a very staring and fixed expression of the eye. The latter passed off very soon, with a tremor. I asked him if he had any pain in the head. He said

"No." Any headache? "No." He was very taciturn, and it was with difficulty that the questions could be answered. His wife then came in and begged to tell me more, when he began to shed tears. She then informed me that he imagined himself ruined in business, and that he had committed some dreadful fraud, and would be constantly urging her to guard well the doors of his dwelling against the sheriff. He seemed, in fact, to be laboring under an acute attack of conscience. The members of his firm were greatly annoyed at the assertions of their partner, as they had been more than ordinarily successful the previous year. His disease was evidently a hallucination from the first. My first suspicion was that it might be a case of alcoholismus, but my subsequent acquaintance with the case proved such a suspicion without foundation. He remained in this state for about two weeks, referring only to his misdeeds; after that he became taciturn, but his answers to questions would be direct, and this would be all that could be obtained from him, except that he would ask for things which he needed. He was very unwilling to have any of his friends come to see him, and when they did was disinclined to hold any conversation. This condition continued without interruption until the time of his death, six months afterwards. He would answer questions very rationally, choose his words well, answer, however, slowly, and if the question referred to anything aside from his bodily health, such as religious or family matters, he would make no reply. As to his temperature, it was never above a hundred, his pulse never above 112, but, as a rule, about 80. He always denied having any headache, had no vomiting, and apparently was without nausea. He took plenty of food, and seemingly with relish.

I applied leeches to his mastoid processes, although I never had any reason to suspect acute brain-trouble from any of the symptoms present. In fact, there was nothing pointing to disease of that part of his body aside from the mental phenomena, and a slight intolerance of light and noise; he preferring to sit in a darkened and quiet room.

On the tenth day of my attendance he lost power over his bladder, and I had to use a catheter to relieve him twice daily, for a period of five months, when, coincident with an attack of cystitis, he commenced to relieve himself.

With the beginning of this vesical paresis commenced a series of symptoms that were exceedingly trying to his attendants, and on the whole somewhat anomalous. He would suddenly sit up in bed, bend over, place his head between his knees, and in a very peculiar manner plunge from one side of his bed to the other, as if determined to get up—and he would have succeeded in throwing himself upon the floor except for an attendant on each side of him. Another favorite manœuvre was for him to attempt to crawl out of his bed head downwards, and, if not watched, would, on having reached the floor with his hands, remain with his chin upon his chest for an indefinite period. He was also addicted to turning somersaults in bed, having previously curled himself into his favorite posture. These tumblings were towards the right invariably. When not actually asleep he was very restless, and would toss incessantly from one side of his couch to the other. These movements were co-ordinate. He had, however, some tremor of the right arm, and sometimes of the right leg; and occasionally after the tremor, for five or ten minutes there would come shocks in the arm, followed by shocks in the leg. Also slight twitching similar to subsultus; the arm first, and leg next. There was also a twitching of the head, a kind of extension and sudden jerking of the head upwards. When he was exceedingly restless, and in the acme of these attacks, he would be seized with a rolling of both eyes upwards. I have seen him for two or three hours at a time in this condition, unable to see. He was troubled very greatly with aphtha in the mouth, which condition I attributed to a sensitiveness of the mouth. On attempting to touch the back of his tongue he would be seized with a shiver over the greater part of his body. On attempting to take anything to eat or drink he would bring it up with great apprehension towards his mouth, and then suddenly thrust it away at arm's length. When he swallowed he did so with a gulp, and frequently while so doing he would be seized with universal tremors. I have never seen so many symptoms resembling hydrophobia, without actually belonging to that disease. He became free from them for three or four weeks, the throat improving, and it was after these symptoms disappeared that these tremors became more pronounced. These spasms subsided altogether two months previous to the termination of his case.

The other functions were normal up to two weeks before death, when uncontrollable diarrhœa set in.

Up to three weeks before his death he would walk into the adjoining room. His locomotion was spreading in character and somewhat jerking. Occasionally he would come to a full stop, and then start off and go pretty well. There never was any tendency to turn to either side, to fall forwards, or step backwards. There never was any increase of difficulty in closing his eyes. At times he would seem to be completely paralyzed so that he could not rise in bed; then he would have to be lifted as dead weight, and, strange to say, a few moments afterwards he would go through the gyrations described. Finally, after he had been five months sick he began to lose flesh, and emaciated rather rapidly towards the end. His mind began to be more sluggish, his answers were slower, but still remained natural, and three days before his death rigidity of the muscles of the neck came on; finally, the head turned to the right side and became fixed. The features became tumid, and the countenance presented the appearance of one having erysipelas. He died May 28, after being twelve hours comatose.

Forty-eight hours after death my friend Dr. Arnold performed the autopsy, with the following result:—

Dura mater healthy and without any adhesions either to the skull or arachnoid. Arachnoid opaque, but anæmic: the opacity, indicative of some degree of chronic meningitis, extended over the surface of both hemispheres and also over the base of the brain, with a healthy zone about two inches in width on the lateral aspects of the cerebrum. There was no plastic effusion, nor adhesion to the convolutions. In one or two situations there were small blister-like elevations filled with about a drachm of clear fluid. The brain-substance, when cut into, was firm and bloodless. The ventricles were found empty. But on making horizontal sections through the cerebrum, the knife encountered numerous gritty particles embedded invariably in the white substance, some of these being in the form of minute spinules, others more like granules and a few even like nodules, one about the size of a small pea being found in a situation closely encroaching on the floor of the left fourth ventricle. Careful examination revealed the presence of this sand-like matter in every part of the white substance of the cerebrum, and in no case seemed to be derived from or connected with the membranes. In the cerebellum, however, this deposit was much more proportionately developed than in the tissue of the cerebrum, so much so that, on breaking up sections of the cerebellum between the fingers, it felt

as if it were completely infiltrated with sand, the deposit being mainly in the form of granules and small nodules.

The only descriptions I have been able to find of pathological products like this, are the remarks of Virchow and Meier on *psammonea* or sand tumors of the brain, which, however, they describe as being found mainly in connection with the dura mater. One such deposit was found in this case connected with the dura mater just above the longitudinal sinus, but the peculiarity of this specimen is, first, the development of the disease in the white substance alone, and, secondly, its singular extent, no part of the medullary portions of the brain being apparently free from it.

Dr. Arnold reports that the chemical constitution of these particles appears to be carbonate and phosphate of lime.

Medulla oblongata presented no change.

Dr. Janeway presented a specimen of

RUPTURE OF THE BLADDER,

with the following history:—The patient, female, from whom this specimen was taken, was admitted at Bellevue Hospital on May 20th. Mary Gallagher, æt. 23 years. She had been accustomed to drink. On the 11th of May she had been kicked in her back and side, and knocked down by a man. Soon after she complained of cramps in the abdomen, and was only able to pass about an ounce of urine of a brown color after a great deal of straining and with severe pain. In a few days she also noticed swelling of the abdomen. On the 19th of May a physician drew off a small quantity of urine.

I saw her at the time of admission, and her skin was cool, pulse 100, abdomen distended, dull on percussion, with distinct fluctuation, except over a small space in the neighborhood and above the umbilicus. She then stated that she had had a fall nine days before, and had been unable to urinate since. A catheter was introduced, and about an ounce of urine, tinged with blood, was all that could be obtained even by pressure.

With the history, the presence of fluid in the abdomen, and the fact that this abdominal swelling came on after the injury, I concluded that there was a rupture of the bladder, and urine, with perhaps some inflammatory products, were present in the peritoneal cavity.

Two methods of treatment suggested themselves. One, the introduction of a trocar and the withdrawal of a certain amount of the fluid, and if it turned out to be urine, a sufficient incision in the abdomen to remove all the fluid; the other, retention of a catheter in the bladder, hoping thus to withdraw some of the fluid. The latter plan was decided upon; and a flexible catheter was so arranged by my house physician, Dr. Corrigan, as to remove the fluid under water, hoping thus to prevent the introduction of air and the decomposition of the extravasated urine if the diagnosis were correct. Whiskey was also ordered.

May 21st. Pulse 97; Th. 97¼° F.; in twelve hours 128 oz. of fluid, having a strong urinous odor, ran off by drops from the catheter. It contained albumen, many pus, some blood cells, and a great deal of penicillum glaucuno, but no casts. At the same time the following change took place in physical signs presented by abdomen: Distention as before, but over the whole anterior surface, and a good deal of the lateral, tympanitic percussion note took the place of dull, which only existed in the flanks; the change in physical signs occurring with the escape of such fluid confirmed the diagnosis. 3 P.M., Pulse 96; R. 20.

22d. Pulse 108; R. 24; Th. 98¾. Ninety-six ounces of urinous fluid were withdrawn by the catheter, which, except for short periods, was still retained. Total quantity in 36 hours, 224 oz. On this morning she commenced to complain of pain and tenderness, and in the afternoon vomited. 7 P.M., Pulse 112; Th. 99½°; R. 20.

23d. The pain is worse; Pulse 112; Th. 100 F.; R. 19. 4 P.M., Pulse 120; Th. 99¾; R. 20. The extremities were noticed to be cold a little later; and she soon passed into a condition of collapse and died, at 3 A.M. of the 24th. The treatment was by morphine and stimulants.

Autopsy, May 24th.—The exterior presented a black ecchymotic patch on arm, and a few scratch-like looking places on the right side of abdomen. The abdomen was markedly distended. The brain was not examined. The heart-valves and walls were normal. The lungs were normal, with exception of some hypostatic congestion and slight pneumonia of a small portion of lower lobe of right side. The peritoneal cavity contained a considerable quantity of slightly yellowish-colored serum, having a faint urinous odor, and some flocculi of lymph floating in it. In the pelvis, however, the amount of lymph was great, and the fluid had an ammoniacal odor. The stomach and the intestines were distended with gas, and their peritoneal surfaces coated by recent exudation, agglutinated at points. The peritonæum everywhere presented traces of inflammation. The liver, as the result of an old perihepatitis, was firmly bound to the diaphragm. Its structural change was limited to an increase of fat in the cells. The kidneys and the ureters were normal; the spleen was normal; the bladder was contracted, and presented in the median line, on the posterior part of fundus, a vertical rupture three-fourths of an inch in length, extending through all the coats, but having an extension upwards and forwards of an additional 1½ inch in the peritoneal coat. The edges of the rupture were approximated, and partially closed by lymph; the mucous membrane and the submucous tissue of bladder presented numerous ecchymotic spots. The vagina, the uterus, and appendages were normal; but the uterus was retroverted and firmly pressed in Douglas's cul-de-sac. The points of interest in the case are: the duration of the disease; the slight symptoms of peritonitis present during its course; which undoubtedly existed at the time of admission as evinced by the number of pus-cells in the fluid obtained by the catheter; the drawing off of a considerable quantity of fluid by a catheter. I do not think that the catheter entered the peritoneal cavity, or the fluid would have run off; but pressing against the wall of the bladder slightly separated the lips of the wounds, and so allowed some of the urine to escape. I would also state, as vaginal paracentesis has been suggested, that the retroversion of the uterus, owing to pressure of fluid, would in all probability have prevented the escape of urine, and perhaps have allowed of puncture of the uterus. Guided by this case, if such treatment should be adopted in another case, it would be wise to place the woman on her knees and chest before operating.

PANCREATIC CALCULI.

He also presented a specimen of pancreatic calculi.

John Oliver, æt. 27; admitted to Bellevue Hospital May 28, 1872. A drinking man; three years before had had syphilis. For six weeks he had complained of diarrhœa, the stools being thin and watery. The skin had a dirty earthy hue: Pulse, 112; R. 28; T. 98½° F.

The first sound of the heart was prolonged. The man was in such a filthy condition that I did not examine him; but my house physician, Dr. Katzenbach,

gave me his history, and the result of his examination. A few days later a pneumonia developed in the right lung. On the 6th of June also involved the left, and on the 8th of June he died.

Autopsy, June 9th, showed:

Heart: agglutinated pericardial surfaces (old), normal size; a little thickening of aoritic valves; more thickening of mitral, and of its chordæ tendineæ, with slight stenosis of orifice; admitted 1½ fingers.

Lungs: croupous pneumonia of a great part of right; and an earlier stage of lower lobe of left.

Liver: fatty; large; at the same time some increase of connective tissue around the lobules.

Spleen: half as large again as usual. The stomach was normal. The small intestines contained considerable deep-green semi-fluid matter.

The large intestine had its mucous membrane thickened; cicatrices with pigment in them at points; a great deal of grayish mucus coating its surface (chronic catarrh of large intestine, and the evidences of bygone dysentery).

Pancreas: This organ was smaller than usual; feeling firm, and as if it contained a number of sand and small pebble-like concretions in it.

A section showed great atrophy of secreting substance in head; a less degree in body and tail; increase of connective tissue, which in some parts took the place of its usual structural elements; the ducts were dilated, and contained a number of small whitish irregular-shaped fragile calculi. These were more numerous in the head, but present throughout. They are probably composed of phosphate and carbonate of lime, their usual composition.

For an article on the subject, see Kleb's Pathological Anatomy.

EMPYEMA—PARACENTISIS—NARROW ESCAPE OF LIVER IN CONSEQUENCE OF PECULIAR ADHESIONS.

Dr. Loomis presented a specimen taken from a sailor, aged 34, who was admitted into Bellevue on 28th of February, with chronic diarrhœa of three months' standing, which he contracted on the coast of Brazil. At the time of admission he was having from twelve to fifteen passages per diem, which were characteristic of chronic dysentery. A physical examination of his chest was negative; a similar examination of the abdominal cavity revealed a simple enlargement of the liver and spleen; the liver extending a little beyond the free border of the ribs; the enlargement seemed principally upwards. He was treated for his chronic diarrhœa by the pernitrate of iron; and by the middle of April he entirely recovered his passages, not being more than one or two in the twenty-four hours; and those were quite natural. During this time he gained flesh somewhat; but he had a bad look from the first, presenting the appearance of one who had lived for a long time in a malarial atmosphere.

About April 29th the house surgeon called Dr. Loomis's attention to the case, and asked him to examine the chest, as the patient had suffered for a few days before with shortness of breath. Dr. L. found the right pleural cavity half filled with fluid; also fluid in the left pleural cavity reaching from the lower border of the scapula. He found over the precordial space a friction sound, which was peculiar in having a purring character, and which could be heard beyond the precordia. The temperature was not raised, and his only symptom which called for relief was dyspnœa. He was placed upon diuretics, with rather more nutritious diet, and quinine in addition to his iron. This treatment was continued until May 21. It was then found that the fluid, although it had disappeared from the left pleural cavity, had somewhat increased in the right pleural cavity. Flatness was distinct as high as the middle of the chest posteriorly.

Following a rule which he thinks a safe one, never to allow fluid to remain in the chest cavity longer than a month, unless it shows a disposition to disappear, the operation of paracentesis was proposed. May 21 the operation was performed by the aspirator kindly loaned him by Dr. Sands. With this instrument there is no possibility of air entering the chest. The needle, which is not much larger than that of an ordinary hypodermic syringe, was introduced between the eighth and ninth ribs posteriorly, at the junction with the inferior scapular and lower axillary regions. After the introduction of the needle, fluid was seen to pass through the instrument, and three pints of bloody serum were drawn off. The patient expressed himself as very much relieved, and it was proposed in a few days to repeat the tapping with a view of emptying the cavity entirely. The evidence of subsidence of the fluid after the tapping was pretty well marked, although the line of dulness did not fall as much as he expected. One week from that day the tapping was repeated. On introducing the same needle in the same place, with the same physical signs present, no fluid followed its introduction. The needle was then withdrawn, and introduced higher up, with a like result. That night the patient began to complain of pain in the side; in fact, complained of pain before he left the amphitheatre. The next morning his respiration became hurried, and at 3 P.M. the same day he was seized with a severe chill. The temperature was then 105°; pulse, 140; and respiration, 52. His countenance became anxious, and he had a very bad look. The next day his temperature was 105°; his pulse, 160; and respiration, 54. The day following his temperature fell to 102; his pulse, 124; and his respiration to between 30 and 40. His countenance assumed a less anxious expression, and he seemed to be doing quite well; that night, however, he commenced rather suddenly to sink, and died before morning.

On making an autopsy, the right pleural cavity was found filled to the line already noted with sero-purulent fluid. At the upper limits of this fluid the pulmonary and costal pleuræ were firmly adherent throughout circumference, so that the fluid was in a shut cavity; above these attachments the lung was more or less firmly adherent over its whole surface. The left lung was found adherent throughout. The pericardium was firmly agglutinated over its whole surface, with lymph of not very recent date. Throughout this tissue there were noticed little fine dots resembling miliary tubercles; these were also found in the pleuritic adhesions.

They were also found to a limited extent in the arachnoid.

On examining the right pleural cavity, he found that he had entered the cavity just an inch above the upper border of the liver. In the first tapping, undoubtedly, the liver was pushed down by the fluid, which on being withdrawn allowed the liver to ride up, and in its turn crowd the fluid away from the site of the first puncture. The needle had not inflicted any injury either to the diaphragm, the diaphragmatic pleura, or the liver; and the change in the symptoms and the subsequent death did not seem to be anything more than a coincidence.

The Society then went into Executive Session.

American Pharmacists.—There are fourteen thousand pharmacists in the United States.

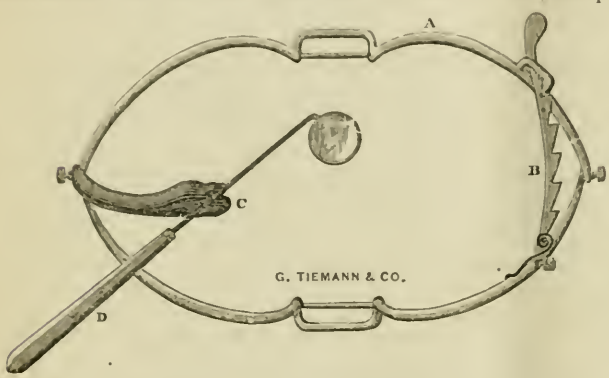
New Instruments.

AN INSTRUMENT FOR HOLDING THE LARYNGEAL MIRROR IN POSITION.

By ANDREW H. SMITH, M.D.,

OF NEW YORK.

Notwithstanding all that has been said as to the inutility of instruments for fixing the laryngeal mirror in position so as to release the hand of the operator, there are cases in which such an appliance will prove useful. We cannot agree with Mandl, for example, that the epiglottis pincette is best held by the patient himself. Very few patients will manage it with the delicacy, and at the same time the precision required. Moreover, as the patient must hold the tongue with one hand, if the



other is employed in holding the pincette, while at the same time both hands of the operator are required, it follows that four hands are employed at once about the mouth; two of which, and precisely the unskilled ones, are unaided by light. That under these circumstances there should be no interference of the hands with each other or with the passage of the light, is a chance upon which one would not choose to hazard the success of an operation. The same remark applies to the hook employed in rhinoscopy for holding forward the velum.

The instrument figured in the annexed cut, and which was made for me by Tiemann & Co., New York, is believed to possess some advantages over those heretofore proposed. It consists essentially of a gag, A, of the kind employed in staphylorraphy, to an angle of which is attached a stem of hard rubber, C, with a slit at its extremity, which serves as a pincette for holding the laryngoscope. A swivel joint in this stem admits of a rotary movement of the pincette, while the whole of the rubber portion moves upon the pivot at the angle of the instrument.

The utmost freedom of motion for the mirror is thus secured, and, at the same time, the stiffness of the joints is such that they will remain in any position in which they may be placed.

In using the instrument the gag is first placed in the mouth, being held only by the incisor teeth. It is then opened to the required extent, where it is held by the ratchet, B. The laryngoscope, D, is then introduced and carried back to the uvula, and the stem engaged in the pincette, C. A slight movement will then give it the inclination required.

By reversing the instrument the laryngoscope may be brought into either angle of the mouth.

This instrument is very useful in demonstrating the larynx, as it enables the demonstrator to move his head out of the way of those who are looking over his shoulder, without risk of displacing the mirror. In operations, too, there is an advantage in having the mouth kept open, without constant effort on the part of the patient.

London, July 9, 1872.

Correspondence.

DR. WHITEHEAD'S GAG.

To the Editor of the Medical Record.

Sir:—Allow me to call attention to a matter that I feel forced to notice. In a work on the Diseases of the Larynx, by Dr. J. Solis Cohen, of Philadelphia, and published by Messrs. William Wood & Co., of New York, Dr. Cohen has copied my woodcuts of my gag to represent what he calls "Elsberg's modification of the gag devised by Smith." (See page 142, figs. 33 and 34 of Dr. Cohen's work.) Under other circumstances it would not be a matter of much consequence to me whether my gag was distinguished by my name or not. It is, however, through my efforts that this gag has been made the effective instrument that my experience with it in the operation for cleft palate has proved it to be. Messrs. Stohlmann, Pfarre, and Schmidt, successors of George Tiemann, and makers of this gag, know all about it and call it "Whitehead's gag." It is so designated on their books of January 18, 1872, of two of these instruments sent to Messrs. Wood & Co., and charged to Dr. Cohen. His figure 33 represents one of them with the latest improvements, and which are the changed arrangements in the tongue depressor, with its hinge-joints, wings, and ratchet spring. Those who know the different gags in use would not think of calling my gag Elsberg's, Mussey's, or Smith's gag, any more than they would of calling Emmet's, Thomas', Watts', or Bozeman's speculum, Sims' speculum.

The wire frames of my instrument and of Dr. Elsberg's are somewhat similar to Mussey's gag. The gag of Mr. T. Smith, of London, is entirely unlike any that I have seen.

What I wish particularly to call attention to, is the impropriety of Dr. Cohen taking the drawings of my instruments to represent Dr. Elsberg's gag.

Yours truly,

Wm. R. Whitehead, M.D.

New York, July 29, 1872.

Medical Ethics.—"The Ethics of the Medical Profession," are pleasantly discussed by Joseph F. Montgomery, M.D., of San Francisco, Cal., in an essay originally delivered before the Sacramento Society for Medical Improvement.

A New Profession for Ladies.—A young lady lately presented herself before the faculty of medicine, at Munich, for examination for a license to practise as a dentist. Being refused, she went to Erlangen. The question was here referred to the governmeut, who at once authorized the examination on the ground that it was absurd to exclude a person desirous of submitting herself to authorized professional tests of ability, by reason of her sex. The young lady triumphed, and "is likely," it is added, "to find immediate imitators."

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 19, 1872, to August 4, 1872, inclusive.

Randolph, J. F., Surgeon.—By S. O. 176, War Department, A. G. O., August 1, 1872, granted leave of absence for three (3) months on Surgeon's Certificate of disability.

Hasson, A. B., Surgeon.—By S. O. 143, Department of the East, August 2, 1872, granted thirty (30) days' leave of absence.

Town, F. L., Surgeon.—By S. O. 141, Department of the East, July 29, 1872, granted 30 days' leave of absence on furnishing satisfactory medical attendance during his absence.

Goddard, C. E., Surgeon.—By S. O. 167, War Department, A. G. O., July 22, 1872, relieved from duty in Department of Dakota, and to report in person to the Commanding General, Department of the East, for assignment.

Sternberg, G. M., Assistant Surgeon.—By S. O. 167, War Department, A. G. O., C. S., relieved from duty in Department of the East, and to report in person to the Commanding Officer, Department of the Gulf, for assignment.

Semple, J. E., Assistant Surgeon.—By S. O. 167, War Department, A. G. O., C. S., relieved from duty in Department of the Lakes, and to report in person to the Commanding Officer, Department of the Gulf, for assignment.

Janeway, J. H., Assistant Surgeon.—By S. O. 122, Department of the Missouri, granted twenty (20) days' leave of absence, to take effect from the date of his leaving Fort Hays, Kansas.

Horton, S. M., Assistant Surgeon.—By S. O. 122, Department of Texas, July 15, 1872, assigned to duty at Fort McKavett, Texas.

Williams, J. W., Assistant Surgeon.—By S. O. 167, War Department, A. G. O., C. S., relieved from duty in Department of the East, and to report in person to the Commanding General, Department of Dakota, for assignment.

Bartholf, J. H., Assistant Surgeon.—By S. O. 68, Department of the Lakes, July 22, 1872, assigned to duty at Fort Niagara, N. Y.

Koerper, E. A., Assistant Surgeon.—By S. O. 122, Department of Texas, C. S., assigned to duty at Fort Griffin, Texas, as Post Surgeon.

O'Reilly, R. M., Assistant Surgeon.—By S. O. 122, Department of the Platte, July 20, 1872, granted leave of absence for thirty days.

Caroallo, C., Assistant Surgeon.—By S. O. 164, War Department, A. G. O., July 18, 1872, granted leave of absence for fifteen days.

Medical Items and News.

Health Department of New York.—At a meeting of the Board of Health, held July 31st, the services of forty-three physicians, forming the auxiliary corps of Assistant Health Inspectors, were dispensed with, at the recommendation of the acting City Sanitary Inspector,—there being no further necessity for their services, as small-pox has been stamped out (!).

Syria.—Rev. W. W. Eddy writes from Sidon, Syria (*N. Y. Observer*), that the summer heats have not brought with them the dreaded cholera. The health of the country has been excellent, even though the small-pox has been prevalent in the city and village on every side. Hardly any deaths from this cause have occurred, nor were the people compelled to refrain from their ordinary pursuits while the death was upon them. All contagious diseases are lighter in this land than in America.

The First Pair of Cylindrical Glasses.—Henry D. Noyes, M.D., of New York (*Am. Jour. Med. Sciences*), has in his possession the first pair of cylindrical glasses made in this country for a case of astigmatism. The subjoined memorandum was made by Rev. Mr. Goodrich, late Chaplain of the N. Y. State Lunatic Asylum, to whom the glasses belonged: "No. 7 French No. (number) cylindr. con., got of McAllister, May, 1828. I wore 14 months, *i.e.*, till July, 1829. Again put into use, March 11th, 1843; they were laid aside Dec. 10th, 1850."

Mr. John McAllister, of Phil., the well-known optician, was the maker. These historical glasses were probably those referred to in the American edition of *Lawrence on the Eye*, page 669 (1854), in a foot note by Dr. Hays.

St. Mary's Hospital of Philadelphia.—The Fourth Annual Report, for the year 1871, of this hospital, under the care of the Sisters of St. Francis, gives the following exhibit: Patients admitted during 1871, 570; discharged cured, 329; improved, 94; unimproved, 33; died, 75; remaining, 39; remaining over from 1870, 35; old people remaining over from 1870, 40. Consumption carried off 27 patients; typhoid fever, 7; senile gangrene, 7; the remaining 34 died from 23 various causes. The percentage of deaths was 12.39, showing a decrease from 1870 of 2.45 per cent. The sex and social condition of the patients were as follows: males, 358; females, 212; married, 245; single, 325. In the Dispensary, 4,550 new patients were treated, who visited this department 10,403 times. James Cummiskey, M.D., is the physician-in-chief.

Thermometry in Epileptic Insanity.—W. J. Conklin, M.D., of the Southern Ohio Lunatic Asylum, Dayton, Ohio (Trans. Ohio Med. Soc.), thus speaks of the use of the thermometer in this disease. 1st. The temperature of epileptic insanity is high, the evening altitude being in excess of that of the morning. 2d. The temperature of the same individual varies largely and bears a relation to her mental condition at the time the observation is made. The periods of excitement present an increase, often amounting to several degrees over the usual temperature. 3d. A depression of temperature occurs just before a single fit, which is better marked in the sleep that follows the seizure; several hours usually elapse before the inter-paroxysmal range is reached.

Deterioration of the American People, and Intermarriage of Relatives.—Following the report on "Sanitary Science," by Dr. J. R. Black, Newark, Ohio, made at the Twenty-sixth Annual Meeting of the Ohio State Medical Society, Dr. R. R. McIlvain, of N. Y., said there were no proofs that the American people are degenerating, and cited the statistics of the States of New York, Ohio, and Virginia, to substantiate his views. He said that the entire white population in 1860, of the United States, was 26,690,206 (should be 26,973,843). Of this number, one in every 2,755 and a fraction was over 90 years of age. Of this population there were 902 over 100 years of age, making one in every 29,578 and a fraction.

In regard to the intermarriage of relatives, he claimed that the history of the Jews as contained in the Bible, from the time of Abraham until now, showed conclusively that the source of all our disasters, social and physical, cannot be traced to intermarriages. To-day they are socially, morally, intellectually, politically, and pecuniarily stronger than they have at been any period since the year 70, when Titus, the Roman General, destroyed their temple and blotted them out as a nation. He inquired if Moses was deaf? or was he idiotic? or was his brother Aaron a sufferer from mental incompetency? or have the descendants of the Jews to our day been distinguished by those diseases which are said to be the results of intermarriages? These were emphatically denied.

The Recent Trial of Mrs. Elizabeth G. Wharton, Balt., Md.—John J. Reese, M.D., Prof. of Medical Jurisprudence and Toxicology in the University of Pennsylvania, publishes in the April No. of the *American Journal of Medical Sciences* an able "Review of the Recent Trial of Mrs. Elizabeth G. Wharton on the Charge of Poisoning, by Tartar Emetic, General W. S. Ketchum." He shows that the testimony of such men as Professors R. S. McCulloch, H. C. White, F. A. Genth, and himself were, in the main, very similar. They all agreed that in every case of metallic poisoning, when the issues of life and death are involved, it is absolutely essential to obtain the *metal* in sufficient quantity, and bring it into court, so as to allow the experts for the defence to operate upon it, and prove the poison. The absolute necessity of excluding all extraneous matters—such as sulphur and organic matter—in the precipitate, which is to be weighed for the purpose of estimating the actual amount of the discovered poison, was insisted upon by these gentlemen.

In this case, as he has shown, this most obvious point was totally neglected, and the attempt was made to cover it up, by flatly denying the necessity of the precaution.

Climatology and Epidemics of California.—This is the title of an interesting paper published in the *Transactions of the American Medical Association*, 1871, by F. W. Hatch, M.D. Among the deaths from diseases of the respiratory class at San Francisco and Sacramento, consumption carried off 574 persons. This class of invalids are continually brought there for relief, thus swelling the death-rate. The author recommends the elevated mountain ranges of the Sierra Nevada, or the east side of the Coast Range Mountains for the consumptive invalid.

Two Large Biliary Calculi.—At the last meeting of the South Carolina Medical Association Dr. R. W. Gibbes, of Columbia, S. C., exhibited two large biliary calculi voided per anum, from a male patient, 36 years of age. The first weighed two hundred and forty grains, and was 3¼ inches in its longest circumference. The other calculus was passed one year afterwards, and weighed two hundred and sixty grains; the circumference was 4¼ inches. When both were held together with their flat bases in contact, they measured 5¼ inches in the long circumference, and 2¼ inches in diameter, being about sufficient to fill an ordinary-sized gall-bladder.

The Cholera.—The progress of cholera in Russia, up to June last, has been as follows:

In the government of Ekaterinoslaw there had been, on June 12th, in the town of Ekaterinoslaw, 316 cases, with 195 recoveries and 109 deaths. In the government of Kiew there had been in the town of Kiew, on June 21st, 2,105 cases with 714 recoveries and 1,001 deaths; and in Oumane on June 10th, 196 cases, with 74 recoveries and 43 deaths. In Odessa, on June 23d, there had been 173 cases, with 60 deaths; and in Kherson there had been on June 21st, 301 cases, with 70 recoveries and 60 deaths. In Kamenets (Podolia), on June 10th, there had been 319 cases, with 46 deaths. Cholera had also broken out in Moscow.

The Austrian authorities at Trieste and Fiume have established quarantine on all vessels arriving from any port in the Black Sea; and the health authorities at Lisbon have also, by general order, made the same arrangements. A St. Petersburg paper reports that cholera had appeared in that city, and that two persons have died from the disease in hospital.

Use of Quinine in Sunstroke.—The *Lancet* of July 13th says that in India the hypodermic use of quinine for the purpose of reducing the high bodily temperature in this affection has been followed by apparently good results.

New Publications.

Books Received.

The Physiology of Man, designed to represent the existing State of Physiological Science, as applied to the Functions of the Human Body. By Austin Flint, Jr., M.D., Prof. of Physiology and Physiological Anatomy, Bellevue Hosp. Med. Coll.. *Nervous System.* New York: D. Appleton & Co. 1872.

Magnetic and Mineral Springs of Michigan, Etc. By Stiles Kennedy, M.D. Wilmington, Del.: James & Webb, publishers. 1872.

Hysterology: A Treatise, Descriptive and Clinical, on the Diseases and Displacements of the Uterus. By Edwin Nesbit Chapman, M.A., M.D., late Prof. of Obstetrics, etc., Long Island College Hospital. New York: W. Wood & Co. 1872.

The Ten Laws of Health; or, How Disease is Produced and can be Prevented. By J. R. Black, M.D. Phila.: J. B. Lippincott & Co. 1872.

Thermic Fever, or Sunstroke. By H. C. Wood, Jr., M.D., Prof. Med. Botany and Clinical Lecturer Diseases of the Nervous System, Univ. Penn. Bolyston Prize Essay. Phila.: J. B. Lippincott & Co. 1872.

Manual of Qualitative Analysis. By Robert Galloway, F.C.S., Prof. Applied Chemistry in Royal College of Science for Ireland. From Fifth London Ed. Phila.: H. C. Lea. 1872.

The Lettsomian Lectures. Pathology and Treatment of some Diseases of the Liver. By S. O. Habershon, M.D. Lindsay & Blakiston, Phila. 1872.

Cancer: its Varieties, their Histology and Diagnosis. By Henry Arnott, F.R.C.S. Phila.: Lindsay & Blakiston. 1872.

Errata.

On page 333, Dr. C. P. Russel's article, read 8 instead of 15 as the number dying from diarrhœa between two and three years of age; 172 instead of 132 as the number of cases of "true insolation;" and 125 instead of 185 as having died within twenty-four hours.

Original Communications.

TRAUMATIC HEMORRHAGE OF THE RECTUM.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

Profuse or alarming hemorrhage of the rectum, consequent upon surgical operations on its inferior extremity, is by no means a rare occurrence. It is often a very grave affair, requiring sometimes the most prompt and energetic measures for its arrest; and if not speedily arrested, leading ultimately to great exhaustion, syncope, and even death. When it is external, or nearly so, it is easily managed; but when it is entirely internal, owing to the narrowness of the anal canal, and the considerable distance up the same of the bleeding wound, it is difficult to get at it; the natural warmth, too, of the intestine itself favors the bleeding; and in consequence of the morbid condition, sometimes, of the blood-vessels themselves it is often persistent and difficult to suppress. Surgical hemorrhage of the rectum, then, is to be dreaded, as well on account of the several discouraging circumstances already named as on account of its being so very insidious, neither the surgeon nor the patient being for some considerable time aware of it, no blood escaping externally to indicate it, or to cause alarm.

The source of the bleeding is generally from one of the hemorrhoidal arteries, yet it is very often almost entirely venous. I have seen large quantities lost in a few minutes after the division of a hemorrhoidal vein. The arteries of the rectum are more numerous and of larger size than in any other portion of the intestinal canal, and being chiefly distributed to the posterior part of the rectum, some of their branches may be divided in the operation for anal fistula, sometimes causing serious hemorrhage; indeed operations on the ano-rectal region are almost always attended with more than ordinary bleeding. There is sometimes an enlarged and varicose condition of the proper veins of this region, especially in old persons and in those who are suffering from diseases of those parts—such as anal fistula, rectal stricture, hemorrhoids, stone in the bladder, etc. In such cases there is generally great induration of the parts, from inflammatory deposits, involving more or less the hemorrhoidal vessels themselves; and consequently when such vessels are divided they are, from this cause, unable to retract and contract, and the result is alarming hemorrhage. Several instances of this character have fallen under my own observation.

In rectal hemorrhage the blood usually flows into the inferior and middle portion of this intestine, from which, however, it may sooner or later be expelled, either in a semi-fluid or coagulated state; or it may accumulate in large quanties in the superior portion, and in the sigmoid flexure of the colon by regurgitation. It is surprising with what persistency the bleeding continues in some of these cases, even when no large vessels are implicated.

As before observed, this accident often follows the operation for fistula in ano, especially when a sinus has been divided high up. It is also very liable to follow the excision of hemorrhoidal or other tumors of the anus and rectum by knife or scissors. Serious hemorrhage is sometimes the result of dividing a stricture of the rectum, when high up. It often follows the division of the sphincteres ani muscles for anal fissure, and the operation for perineal artificial anus.

Many patients have perished from rectal hemorrhage, as the records of surgery show, and many more have perished from this cause of whom no record exists. Some of these fatal cases were doubtless lost, either through ignorance on the part of the operator of the proper measures to be adopted in such a case, or through a want of presence of mind and firmness in him, to insist upon, and promptly to execute the appropriate means. I could here cite numerous examples to prove how alarming, how dangerous, how injurious, and how fatal this hemorrhage has been.

Such was the constant dread of rectal hemorrhage that the celebrated Baron Dupuytren, who invariably removed hemorrhoidal tumors with the scissors, never neglected the precaution of either at once applying the heated iron to the wounded parts, or leaving an assistant with the patient in order to arrest the bleeding by the same means should it occur. Indeed this distinguished surgeon recommended the actual cautery to be applied to the wounded surfaces in every case immediately after each operation of the kind, as he found its application absolutely necessary in nearly every patient upon whom he operated, in order to arrest frightful hemorrhage; and for this purpose had special cauteries constructed.—(*Leçons Orales de Clinique Chirurgicale.* Tome i., p. 357. Paris, 1832.) The same dread of hemorrhage induced Sir Astley Cooper to reject the use of the knife and scissors altogether in the removal of hemorrhoids, and to adopt instead the use of the ligature. This great and good surgeon was candid enough to admit in his lectures the loss of several of his patients from hemorrhage, consequent upon excision of hemorrhoidal tumors.—(*Surgical Lectures.* By Tyrrell; p. 301. Philadelphia, 1839.) The late Sir Benjamin C. Brodie says he nearly lost three patients from rectal hemorrhage, following the excision of hemorrhoidal tumors.—(*Clinical Lectures on Surgery*, p. 314. Philadelphia, 1846.) The late able and distinguished Mr. Syme considered that serious and fatal hemorrhage was exceedingly liable to follow excision of hemorrhoids.—(*On Diseases of the Rectum*, p. 77. Edinburgh, 1854.) Mr. Fergusson, with the same dread of rectal hemorrhage before him, says: "I have an equally strong opinion as to the impropriety of cutting internal piles with the knife or scissors. There may be such an internal bleeding as to endanger life, as I have myself experienced; yet while I admit that such a practice may be followed again and again without mischief, I would earnestly caution the young surgeon against rashness in this respect. In one instance, having become emboldened from using the scissors with impunity in a variety of cases, I nearly lost a patient from hemorrhage into the rectum, from a small portion of a wound in the mucous membrane, which passed within the sphincter. On cleaning the rectum from a large collection of blood, and applying ice, the bleeding stopped; but probably this was as much the result of the faintness from loss of blood as from any such surgical means that were adopted."—(*A System of Practical Surgery*, p. 549. Philadelphia, 1853.) The late Dr. Bushe says, "that excision of hemorrhoidal tumors is not likely to be attended with hemorrhage, I deny, for I have performed the operation several times, and after it, have had to tie up arteries, plug the rectum, and in one instance to apply the actual cautery. Indeed, I so nearly lost two patients, that when left to my own choice I no longer have recourse to this operation."—(*A Treatise on the Malformations, Injuries, and Diseases of the Rectum and Anus*, p. 183. New York, 1837.) The following pertinent remarks

upon this subject are from the able and distinguished Professor N. R. Smith, of Baltimore: "Excision of hemorrhoids is the expedient that first presents itself. But for one circumstance—the danger of hemorrhage—this would be the shortest and most effectual expedient. This has been in times past much practised, and often with success. But the occurrence of many fatal cases of bleeding has deterred the modern practitioner. Sir A. Cooper's cases are well known, and were all surgeons as candid, we should have many more such beacon lights. Were the bleeding part so located as to be accessible to our remedies, there would be no risk; but when a hemorrhoidal tumor has been cut away with the knife, the wounded surface retires within the sphincter and is reached with great difficulty."—(*Baltimore Medical Journal*, vol. 1, p. 9, January, 1870.)

The same dread of surgical hemorrhage of the rectum led to the invention and the adoption of the *écraseur* for the removal of hemorrhoidal tumors. But *écrasement* by no means always insures against alarming hemorrhage of the rectum sooner or later after such operation, as the records of surgery abundantly prove.

With regard to the incision of hemorrhoidal tumors by knife or scissors, particularly if they are large and situated above the sphincteres ani, and a vein has been freely opened, the operator cannot expect anything but a free and copious discharge of blood; the structure of the portal veins facilitating such a sequel to the operation. Attention, however, to the different conditions of the affection, and the relations of the tumors to the anal sphincteres, will always enable the surgeon to be prepared for the hemorrhage, and to have his means always in readiness to arrest it in case it should follow a properly considered and well-executed operation. In consequence of inattention to these pathological conditions and measures, the worst results have followed, as well as may again hereafter follow.

Were the measures, however, for arresting surgical hemorrhage of the rectum as well understood and appreciated as they by all means should be, or as those are at the present day for suppressing such hemorrhage generally, few fatal cases, in my opinion, would ever be likely to occur, whether either knife or scissors were used.

Symptoms.—Besides the characteristics which are common to all internal hemorrhage, that of the rectum has peculiarities which enable it to be readily distinguished from all others. In the largest number of instances from one to four hours elapse after the operation before the symptoms indicating rectal hemorrhage begin to manifest themselves. The patient, after having recovered from the excitement and fatigue of the operation, and perhaps after having been comparatively comfortable for some time, has now a tendency to drowsiness, or becomes anxious, agitated, and restless; he has tingling of the ears, swelling, tension, and sensibility of the abdomen, especially in the left iliac fossa; and is sometimes conscious of a sensation of warmth or heat extending gradually along the bowel from below upwards; has perhaps colic pains, with a painful kind of tenesmus and frequent desire to evacuate the bowels with more or less inability to do so; his pulse is intermittent or irregular. Sooner or later, unless relieved, other and more marked symptoms supervene. There is now a tendency to stupor, and a deadly paleness overspreads the patient's face, which, together with the whole surface of the body, is often bathed in cold perspiration; his respiration becomes hurried, difficult, and anxious; his pulse small, frequent, and almost imperceptible; he sometimes has nausea and vomiting; is seized with rigors, spasms of the extremities, and vertigo. Such phenomena cannot well be misinterpreted by the surgeon, inasmuch as they plainly indicate that alarming hemorrhage is going on within the rectum, and that the blood in the mean time is accumulating in the colon. The patient may die without even discharging the contents of the bowels; but in most instances the tenesmus becomes so great that he makes efforts to stool, and evacuates a large quantity of clotted blood, and whilst doing so, often faints, which, for the time being, opposes a barrier to the further effusion. More frequently, however, when the intestine is relieved of its contents, especially if this has been effected in the recumbent or horizontal posture, a sense of general ease and comfort is the immediate consequence, and the only well-marked remaining symptom is that of great prostration. Should the surgeon now neglect to avail himself of this precious truce in arresting the bleeding promptly, the symptoms will be almost certain to reappear speedily, and if possible more alarmingly than before, and the patient's previous restlessness will often be followed by feelings of despair; and the depression consequent upon this will sometimes be such that he will even pray that death might come to his relief.

Suppression of the Hemorrhage.—The measures for arresting rectal bleeding differ, and may be comprised in the following: 1. *Ligation;* 2. *Torsion;* 3. *Cauterization;* 4. *Compression;* 5. *Styptics;* and 6. *Cold Applications.*

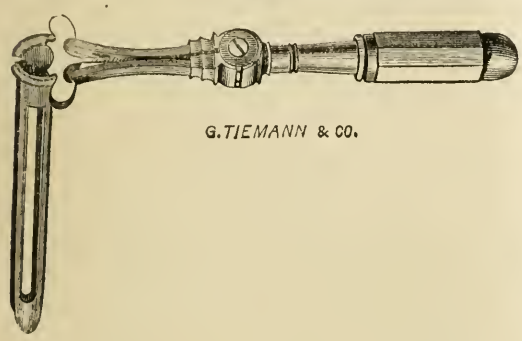
The ligature, twisting, and the actual cautery are the chief measures, however, upon which to rely in alarming cases. But as cauterization with the iron is almost certain to be followed by high inflammation, if not by sloughing and contraction, it should be employed only as a dernier resort. Torsion is as efficient and as reliable as ligation, when the vessel is small and sound. It is especially indicated in cases in which the bleeding is so deep that the vessel cannot be tied.

Should the operator entertain the slightest suspicion that internal rectal bleeding is taking place, he should at once direct the patient to evacuate the bowel if possible. Should the patient, however, fail in accomplishing this by the natural efforts, an enema of one or two pints of cold water, or salt and water, should be administered, and if necessary, repeated every few minutes, until the rectum becomes so stimulated as to completely expel its contents, which, if hemorrhage has been going on, will generally be found to consist of a greater or less quantity of coagulated blood. The patient thus by his straining efforts might perchance force down the bleeding wound sufficiently low so as to be seen; should he fail, however, in this, in consequence of the wound being too high up, the operator should then endeavor to pull down the rectum gently, by means of a vulsellum or pronged hook inserted into the submucous tissue, until the bleeding point was fairly brought into view, and then the vessel either ligated, twisted, or cauterized, as he might select. This method sometimes happily succeeds. The great difficulty, however, in some instances, is to ascertain precisely whence the bleeding proceeds, especially when from small vessels and at several points. Nothing but a minute examination of the interior of the rectum by means of a proper speculum will enable the operator sometimes to detect the bleeding point or points, unless the hemorrhage proceeds from a large vein, or from a considerable artery, as indicated by the peculiar jet or scarlet color of the blood.

Failing by the above process, and with the intention now of employing the speculum, the rectum and bladder both having been previously emptied, the patient

should be placed upon his left side, on the edge of a bed or table, in front of a strong light; the back and hips as near the edge as possible, the pelvis elevated, the head and shoulders depressed to favor the action of the heart and the return of the blood to the brain, and the thighs flexed upon the abdomen. A piece of rubber or oil-cloth, if at hand, or something else, should be placed under the hips, so as to protect the bed from the fluid discharges, and a vessel placed at the bedside to receive them. It is also important that a free access of air should be provided in the room. The patient being in this position, the operator should introduce into the rectum the tri-valve trellis speculum (Fig. 1),

Fig. 1.



which I devised a number of years ago especially for this purpose. This instrument is quite small when closed, and easy of introduction, and when introduced admits of extensive expansion by simply revolving the handle. By it, when the blades are widely expanded, all the sides of the interior of the rectum are at once brought into view; and by the aid of a sponge mop the exact source of the bleeding may be easily discovered. The speculum, thus revealing the true state of the case, gives the operator great advantage in controlling the hemorrhage, by giving him confidence, courage, and hope. He sees whence the effusion comes, and makes an estimate of the quantity being lost, by what passes out through the opened anal orifice, as no internal accumulation can now any longer take place. If he should thus find that the effusion is not very great nor alarming, cold applications in the form of irrigation might be employed before resorting to ligation. This generally arrests ordinary, and sometimes even extraordinary bleeding. The iced-water should be directed through the open speculum upon the bleeding point in a *continuous* stream from a Davidson syringe. If the stream is made directly upon the wound, it has a powerful tendency to promote the contraction of the bleeding vessel, to allay pain, and to prevent inflammatory action. This course, if successful, should be continued until the hemorrhage entirely ceased, and then the speculum should be partially closed and carefully withdrawn. If the hemorrhage, however, is found to be rapid and alarming, the bleeding vessel must at once be tied, twisted, or cauterized before resorting to irrigation.

Ligation.—For the purpose of seizing and ligating a bleeding vessel some considerable distance up the rectum, I use instead of the common tenaculum the long and slightly curved spring forceps (Fig. 2.) which I had constructed especially. It has a sliding attachment, intended chiefly as a *porte-ligature*, lying flat upon its upper blade, and nearly of the same length. This attachment at its distal end has a beak for holding and carrying the loop of the ligature; near its centre it is armed with two narrow flanges which partially embrace the lower blade of the forceps; and near its proximal extremity it has a rough button, by means of which the slide is projected as far as necessary for carrying the loop of the ligature, and also retracted; by these two movements the blades of the forceps may be locked and unlocked, as may be desired.

The operator, seeing the bleeding vessel through the speculum, seizes it with the forceps previously armed with a suitable silk ligature of sufficient length, and having the proper noose in the centre of it. He now projects the slide, by which movement he locks the blades, and carries the ligature to the seized vessel. He then places the locked forceps into the hand of the assistant who holds the speculum, and whilst holding both ends of the ligature in his left hand, and with a long probe in his right, disengages the noose from the beak of the *porte-ligature* and places it upon the base of the seized vessel, and when properly adjusted, tightens the knot firmly by means of Dr. A. L. Carroll's admirable *knot-tier* (Fig. 3). A second knot, if deemed necessary, may be made and tightened in like manner. When the vessel is secured the rectum should be well syringed out with cold water, and if the hemorrhage has entirely ceased, the speculum should be carefully withdrawn, leaving the two ends of the ligature hanging out of the anus. In the mean time the patient should maintain the horizontal posture, take an opium pill, live on a milk diet, and avoid a fæcal dejection for several days.

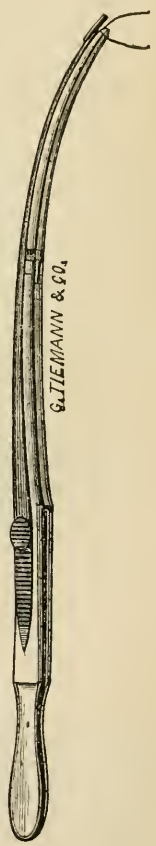


Fig. 2.

Should Dr. Carroll's instrument not be at hand the knot may be tied as tight as necessary by a method I have practised for many years in ligating polypoid tumors of the rectum, which is as follows:—The vessel being seized with the forceps as above directed, the operator hooks one end of the ligature in the cleft extremity of the silver director or *sonde cannelée* which he holds in his right hand, whilst the other end of the ligature is held in his left, and sufficient traction made upon each at the same time as to tighten the knot firmly. In this manner a bleeding vessel may be seized with the forceps and secured with the ligature at a distance of four or five inches up the rectum; or a polypoid or pile tumor may be ligated almost as easily and as effectually as if it were at the verge of the anus.

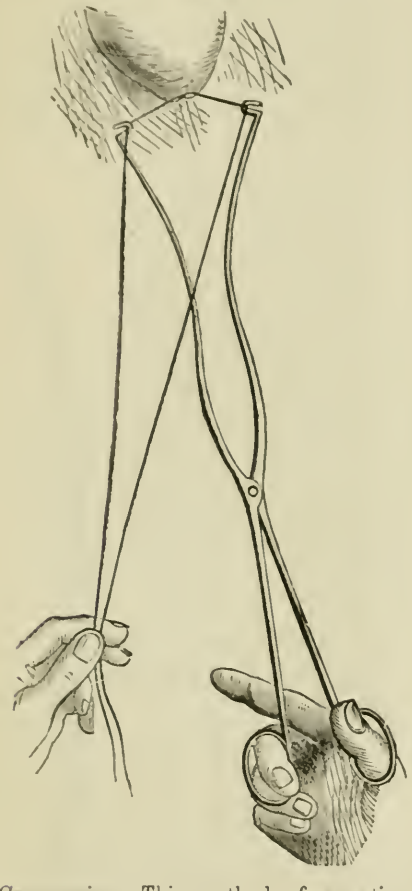
2. *Torsion.*—If the operator prefers torsion to ligation, it can be efficiently performed by means of the spring forceps already named, or by Physick's forceps.

3. *Cauterization.*—If neither ligation nor torsion can be made available, and the hemorrhage is alarming and threatening life, the actual cautery should without hesitation be at once employed. The cautery iron should be heated to a white heat, and applied to the bleeding vessel through the opened speculum, being very careful to seal it completely. The severe smarting pain, the constipation, and the retention of urine which follow the application of the actual cautery should be combated by proper means. To relieve the severe pain, anodynes and emollient applications

must from time to time be employed. *Constipation* must be relieved by linseed enemata and castor oil; and *ischuria* and *dysuria* by tepid baths, fomentations, and, if necessary, the catheter; and the tendency to contraction, by the use of the bougie.

The cauterization may also be thoroughly effected by the *galvano-cautery* of Middeldorpff.

Fig. 3.



4. *Compression.*—This method of arresting rectal hemorrhage is valuable, if properly applied and maintained in sufficient force. It is especially applicable to deep-seated bleeding, and in such cases, in which other methods have failed, it should by all means be attempted. It is, however, in rectal bleeding obnoxious to several serious objections:—

1. The parietes of the rectum upon which the compression is made are not firm and resisting enough to make it as completely effectual as would be desired, but are, on the contrary, yielding and distensible to an almost indefinite extent.

2. The pressure, being from the interior to the exterior, is very difficult of accomplishment.

3. The rectum will scarcely ever tolerate in its cavity the presence of any apparatus for making compression. The incessant involuntary expulsive efforts which such a foreign body provokes, and which cause so much inconvenience and suffering to the patient, unless constantly kept under the influence of extraordinary doses of opium, are almost certain to result in its forcible expulsion.

4. Even should the compressing apparatus not be expelled by the involuntary efforts of the patient, it is absolutely necessary for it to be frequently removed, to allow of defecation.

5. In some instances, notwithstanding the presence of the compressing appliance in the rectum, the internal bleeding may still continue to go on for a considerable period without being detected, and in this way may, for the time being, prove deceptive, and precious time be lost.

Tamponnement.—Several methods have been devised for plugging the rectum, with a view of making compression, and arresting rectal hemorrhage. For this purpose the *tampon*, *pelote*, or plug, composed of various materials, is generally employed.

A very ingenious method of making compression by means of a kind of double *tampon*, in cases of rectal hemorrhage, consequent upon the excision of hemorrhoids, was first suggested and successfully employed by M. Petit, a century ago.—(*Traité des Maladies Chirurgicales.* Tome ii. p. 128. Paris, 1790.)

This method of Petit was subsequently simplified and improved by M. Boyer.—(*Traité des Maladies Chirurgicales.* Tome vi. p. 556, 5th Ed. Paris, 1849.)

For the same purpose M. Desault employed with success a *tampon* composed of a square piece of linen, the centre of which was introduced into the rectum, and filled with lint; after which the corners of the same were strongly pulled against the buttocks, and secured by a bandage.—(*Œuvres Chirurgicales.* Tome ii. p. 417. Paris, 1813.)

A modification of the methods of MM. Petit, Boyer, and Desault was made by our own countryman, the late and lamented Dr. Barton, of Philadelphia. His method is as follows:—"Take a sufficient number of pledgets, made from portions of a common roller-bandage, or other piece of muslin, about two inches in width, and long enough, when loosely wound, to gain ready admittance into the rectum. Let each pledget be secured by a ligature, tied round the middle of the roll, and long enough to leave several inches of the ligature freely dependent from the anus. Introduce these pledgets, previously thoroughly oiled, one after another, into the rectum, until the lower part of that viscus is distended by the muslin, leaving the free ends of the ligatures hanging from the anus. This being done, divide the projecting ends of the ligatures, carrying one-half their number toward the right hip, and the other half toward the left; then take a large pledget or small roller, firmly wound, and place it between the parted ligatures, with its axis in the antero-posterior direction; lastly, gather the ligatures from the opposite sides of the anus and tie them across the external pledget with sufficient firmness to arrest the hemorrhage."—(*American Cyclopædia of Practical Medicine and Surgery.* Art. Anus, vol. ii. p. 115. Philadelphia, 1841.)

I have made and used the following *tampon* successfully on two occasions:—Take a strip of fine cotton or linen cloth about nine inches long, and about seven inches wide, sew it up in the form of a bag or purse, wet it, lubricate it with the white of eggs, and introduce it into the rectum some distance beyond the bleeding point by means of a slightly forked slender rod, and then, with the same, stuff the upper portion of the sack tightly with lint, cotton wool, or tow; afterwards draw on the perineal portion of it, as if pulling it out, until sufficient compression is made from above downwards, to arrest the hemorrhage. It should now be maintained firmly in this position by a proper compress and T-bandage. To remove the *tampon*, a portion of its contents must first be taken out, which can be very easily done by means of the common dressing forceps. The *tampon*, however, should not be disturbed,

if possible, for several days, and measures should be adopted to keep the bowels confined for that period.

Mr. Allingham of St. Mark's Hospital, London, recommends the following method in secondary rectal hemorrhage:—When called to see a case of this kind, always arm yourself with a full-sized bell-shaped sponge and plenty of cotton wadding; take also some persulphate of iron; or if you have not that, powdered alum. Thread a strong silk ligature through, near the apex of your cone-shaped sponge, and bring it back again, so that the apex of the sponge is held in a loop of the thread. Then wet the sponge, squeeze it dry, and powder it well, filling up the lacunæ with iron or alum. Pass the forefinger of your left hand into the bowel, and upon that as a guide, push up the sponge—apex first—by means of a metal rod, bougie, pen-holder, or a rounded piece of wood, if you can get nothing better. Now this sponge should be carried up the bowel at least five inches, the double thread hanging outside the anus. When this is so placed, fill up the whole of the rectum below the sponge thoroughly and carefully with cotton wool, well powdered with the iron or alum. When you have completely stuffed the bowel, take hold of the silk ligature attached to the sponge, and while with one hand you pull down the sponge, with the other push up the wool. This joint action will spread out the bell-shaped sponge, like opening an umbrella, and bring the wool compactly together; if this is carefully done no bleeding can possibly take place, either internally or externally." — (*Fistula, Hemorrhoids, and other Diseases of the Rectum*, p. 122. London, 1871.)

A pig's bladder, softened in warm water and introduced into the rectum, and filled with *charpie*, makes a good *tampon;* it was first used with success by M. Levret, and subsequently recommended and used by M. Dupuytren (*loc. cit.*) and others. The bladder may be filled with either lint, air, or water.

Upon the same principle, the late Dr. Bushe invented a very ingenious instrument for making compression in rectal bleeding (*op. cit.* p. 185).

Digital Compression.—Direct compression by means of the finger or fingers, introduced into the rectum, cannot be considered as a methodical proceeding. It constitutes, at best, but a temporary means until the operator can have recourse to a more energetic plan. The operator should introduce the first and second finger of his right hand into the rectum, and make firm pressure upon the bleeding wound, and at the same time urge the patient to make efforts to draw up the anus, or to contract the sphincters as closely as possible, and thus endeavor by these two forces to compress the bleeding vessel or vessels. It is true that digital pressure, unless it is maintained by a relay of assistants, is very inconvenient and fatiguing to the operator, but as it sometimes succeeds well, it should be resorted to. If by this proceeding the hemorrhage is arrested, the fingers, after having remained in the bowel from one to two hours, may be carefully withdrawn, and small bags of ice applied to the anus.

5. *Styptics.*—The considerable depth at which the bleeding occurs in rectal hemorrhage renders ineffectual, to a great extent, those hæmostatica to which recourse is had when the source of the bleeding is less deeply seated.

When the effusion proceeds from small vessels, and at numerous points, it may often be suppressed by the insufflation of a powder composed of equal parts of alum and tannin, or by powerful astringent injections. Mr. Curling, Surgeon to the London Hospital, recommends the following as a valuable injection in obstinate rectal hemorrhage:—

℞ Tannic acid	ʒ j.
Alcoholis	ʒ iij.
Aquæ	ʒ j.

Fiat injectio.

6. *Cold Applications.*—These, even as adjuvants, are highly valuable, and cannot be dispensed with whilst the hemorrhage continues. The cold applied in the form of irrigations I have already recommended and described. Small bags of ice should be constantly kept applied to the anal region as well as to the thighs.

To conclude, the patient during the whole treatment should be required to maintain strictly the recumbent or the horizontal posture, and to freely use acidulated drinks. Full doses of opium, or opium combined with the acetate of lead or gallic acid, should be administered. These are measures that should never be omitted, inasmuch as they constitute a very important part in the treatment of all traumatic hemorrhages. In great prostration the treatment must be stimulating. A smelling-bottle must be held to the nose of the patient, and if he can swallow he must take large quantities of brandy, either alone or in union with ammonia. These remedies may be aided, if necessary, by the application of heat, friction, and sinapisms to the spine as well as to the præcordial region; measures which will generally soon restore him. When reaction begins the patient must be carefully watched, lest over-stimulation take place, followed by excessive nervous and sanguineous excitement. I would once more observe, before closing, that some cases of rectal hemorrhage admit of no delay whatever, being quite alarming from the commencement, by rapidly exhausting the patient. Such cases require the most prompt and vigorous action, or all will be lost; hesitation or indecision would be fatal. The means already pointed out must be put into immediate force; the rectum must be thoroughly emptied of the blood; the anus must be dilated with the speculum, the bleeding vessel or vessels, if possible, taken up by ligature; or, if this is impossible, the actual cautery must be resorted to, or compression, astringents, and cold applications must be employed and steadily persevered in until all danger is over.

NEW YORK, 29 West 31st Street.

SMALL-POX STATISTICS.

By A. E. MACDONALD, M.D.,

CHIEF OF STAFF, CHARITY HOSPITAL.

In a former paper upon the above subject, published in the RECORD of May 1st, 1872, I presented the statistics of the New York Small-pox Hospital for 1871, and drew attention to the deductions to which they appeared to point. These were, in brief, that persons of foreign birth were more liable to contract the disease than natives, but less apt to die from it; that males were more subject to it than females, and died from it in larger proportion; and that in the case of colored patients the ratio of mortality exceeded that of any other class.

Reviewing these deductions, in a communication to the RECORD, Dr. Charles P. Russell, of the Metropolitan Board of Health, attributes the preponderance of deaths among native over foreign-born patients to the fact that in the former class a larger number of children under ten years of age is included. Predicting that to exclude them from the computation will be to deprive my figures of their significance, the Doctor suggests a re-examination of the subject, and the limiting of comparisons to patients over ten years of age.

In compliance with this suggestion I have again examined the matter,—this time in the manner proposed by Dr. Russell, and with the following result:—

I took for the purpose the cases of 1,474 patients who had passed through the hospital during the first five months of the present year, and concerning whom there were explicit and reliable details upon the points of age and nativity. Separating these, I found that there were 1,223 over, and 251 under ten years of age. Leaving the latter out of the question, and again dividing the former, there remained 324 natives and 899 foreigners. A third division, separating those who died from those discharged cured, showed that there were 97 deaths among the natives against 161 among the foreigners. Therefore, out of 324 natives over ten years of age treated, 97 died, or 29.93 per cent.; and out of 899 foreigners, 161, or 17.90 per cent. There remains, accordingly, a difference of twelve per cent. in favor of the patients of foreign birth. According to my first paper the difference was but 11 per cent., so that the exclusion of children from the computation, so far from diminishing the contrast, as Dr. Russell predicted it would, actually makes it the more conspicuous.

Still unwilling to regard these results as absolute, I determined to prosecute my inquiries further. The statistics of other small-pox hospitals not being readily accessible to me, I have continued my researches to those of the one under my charge, and present in the accompanying tables a condensed statement thereof, from the 1st of January, 1850, up to and including the month of May of the present year. Extending over a period of more than 22 years, and embracing the details of over 11,000 cases, their indications may be regarded as fairly accurate.

TABLE A.

ADMISSIONS, 1850-1872.

YEAR.	WHITE.		COLORED.		TOTAL.	NATIVE.	FOREIGN.
	MALE.	FEMALE.	MALE.	FEMALE.			
1850	144	48	10	6	208	60	148
1851	179	88	20	9	296	122	174
1852	84	46	11	8	149	79	70
1853	95	44	9	8	156	100	56
1854	118	47	15	5	185	112	73
1855	27	23	5	1	56	36	20
1856	82	37	10	5	134	78	56
1857	98	61	26	12	197	125	72
1858	131	60	17	8	216	113	103
1859	72	56	6		134	78	56
1860	146	86	2	4	238	75	163
1861	573	248	46	18	885	352	533
1862	196	102	19	4	321	119	202
1863	135	110	4	3	252	51	201
1864	419	250	28	3	700	292	408
1865	588	368	45	23	1024	375	649
1866	139	129	19	4	291	68	223
1867	82	106	4	1	193	19	174
1868	86	122	3	1	212	42	170
1869	123	108	2	3	236	78	158
1870	513	429	17	18	977	317	660
1871	1299	1134	35	30	2498	1097	1401
1872 5ms.	978	741	23	9	1751	649	1102
Total 1850–72	6307	4443	376	183	11,309	4437	6872

TABLE B.

DEATHS, 1850-1872.

YEAR.	WHITE.		COLORED.		TOTAL.	NATIVE.	FOREIGN.
	MALE.	FEMALE.	MALE.	FEMALE.			
1850	22	13	5	1	41	18	23
1851	40	14	3	1	58	36	22
1852	17	6	1	1	25	16	9
1853	20	13	5	1	39	30	9
1854	24	7	8	1	40	32	8
1855	6	4			10	9	1
1856	15	7	3	2	27	22	5
1857	13	11	8	1	33	27	6
1858	21	14	4	1	40	30	10
1859	9	3			12	11	1
1860	18	9	1		28	19	9
1861	72	37	11	3	123	75	48
1862	35	14	4	3	56	24	32
1863	8	9	1	1	19	3	16
1864	64	33	8		105	52	53
1865	81	45	11	3	140	71	69
1866	17	10	2		29	9	20
1867	8	6	1		15	2	13
1868	8	7			15	3	12
1869	21	16	1	1	39	14	25
1870	61	36	3		100	45	55
1871	307	202	14	10	533	303	230
1872 5 ms.	264	167	12	3	444	197	247
Total 1850–72	1149	683	106	33	1971	1048	923

TABLE C.

PERCENTAGE OF DEATHS TO ADMISSIONS IN EACH YEAR AND CLASS.

YEAR.	WHITE.		COLORED.		TOTAL.	NATIVE.	FOREIGN.
	MALE.	FEMALE.	MALE.	FEMALE.			
1850	15.27	27.08	50.00	16.66	19.71	30.00	15.54
1851	22.34	15.90	15.00	11.11	19.59	29.50	12.64
1852	20.23	13.04	9.09	12.50	16.77	20.25	12.85
1853	21.05	29.54	55.55	12.50	25.00	30.00	16.07
1854	20.33	14.89	53.33	20.00	21.62	28.57	10.95
1855	22.22	17.39			17.85	25.00	5.00
1856	18.29	18.91	30.00	40.00	20.14	28.20	8.92
1857	13.26	18.03	30.76	8.33	16.75	21.60	8.33
1858	16.03	23.33	23.52	12.50	18.51	26.54	9.70
1859	12.50	5.35			8.95	14.10	1.78
1860	12.32	10.46	50.00		11.76	25.33	5.52
1861	12.56	14.91	23.91	16.66	13.89	21.30	9.00
1862	17.85	13.72	21.05	75.00	17.44	20.17	15.84
1863	5.92	8.18	25.00	33.33	7.53	5.88	7.96
1864	15.27	13.20	28.57		15.00	17.80	12.99
1865	13.77	12.22	24.44	13.04	13.67	18.93	10.63
1866	12.23	7.75	10.52		9.96	13.23	8.96
1867	9.75	5.66	25.00		7.77	10.52	7.47
1868	9.30	5.73			7.07	7.14	7.05
1869	17.07	14.81	50.00	33.33	16.52	17.94	15.82
1870	11.89	8.39	17.64		10.23	14.19	8.33
1871	23.63	17.81	40.00	33.33	21.33	27.62	16.41
1872 5 ms.	26.99	22.53	52.17	33.33	25.35	30.35	22.41
Per cent. 1850–72	18.21	15.37	28.19	18.03	17.42	23.61	13.43

Table "A" shows the number of patients of each sex and class admitted into the hospital in the several years. It is apparent from it that the admissions for the year 1871 exceed in number those of any former year, and that the numbers received during the first five months of the present year promise for 1872 a still greater excess. In the admissions for the entire series of years, as noticed in my former paper concerning the year 1871, the foreigners preponderate over the natives, and the males over the females. The highest number received in a single year is 2,498, the lowest 56.

Table "B" shows the number of deaths each year, in each class.

Table "C" gives the percentage of deaths to cases in each year and class, and also in each class for the entire period of twenty-two years and five months. It will be found that the computation extending over this considerable period, and embracing so large a number of cases, entirely confirms the deductions made in my former paper upon the examination of the statistics of a single year. The death-rate among the native patients exceeds that among those of foreign birth by over ten per cent.; the rate among males again exceeds that among females, although the difference is not so considerable; and again the death-rate among colored patients exceeds that of any other class.

Upon the point of relative mortality between natives and foreigners the statistics of the several years certainly markedly agree. In but a single year—1863—is the difference in favor of the natives.

To be sure, in this calculation the element of age is not considered. The separation of those patients over, from those under ten years of age, would occupy more time than I could devote to it; and I think the experiment detailed in the former part of this paper is sufficient to show that it would make no material difference in the result.

In my former paper I deprecated the idea of basing an absolute conclusion upon the statistics of a single year; and at the time of writing it, was myself unwilling to accept as indisputable their apparent lesson:—that foreigners better than natives could withstand the ravages of small-pox and kindred diseases. Finding the result confirmed by a second experiment made especially with reference to the age of patients; and again by a third, in which the statistics of twenty-two years and eleven thousand cases are considered, I must regard it as tolerably conclusive. To explain it away something more than conjecture or unsupported assertion will be needed, and I doubt if the figures can be made to tell any other story.

I am far from making the assertion, or holding the belief, that what I have shown to be true of a single disease in a single community is the history also of all diseases in the country at large. I do hold that of the population of the city of New York the foreign element, more than the native, manifests the vigor of constitution necessary to preserve life through the course of an exhaustive disease like small-pox.

Progress of Medical Science.

Treatment of Hypertrophied Tonsils with Chromic Acid.—Dr. B. Frænkel (*Berliner Klin. Woch.*) says that the application of fine needles of chromic acid to the tonsils is almost without pain or danger, and causes a notable shrinking of the parts. By frequent application of this remedy we can cause the hypertrophy to be reduced to one-half its volume. He also injects iodine into the tonsil in some cases, the iodine being dissolved in 100 parts of glycerine.—*The Doctor.*

Treatment of Diabetes.—Dr. Richardson, who was himself a sufferer from this disease, effected a cure in his own case, and subsequently in various patients under his care, by adopting a plan of which the following are the essential features: The employment of regular and steady exercise; ablution of the skin daily with soap and water; twice in the week the use of a bath containing a tablespoonful of the carbonate of soda; exposure of the body, as far as is practicable, to the action of sunlight, and the continuous use of iron, which he uses in the form of tincture of the perchloride in four or five-drop doses, with one or two drops of tincture of nux vomica, and eight or ten grains of chlorate of potash, three times daily. He is an advocate of a restricted diet; but when the plan of treatment he recommends is carried out fully, he finds that a considerable amount of relaxation, as regards food, is not injurious. He regards the sudden adoption of a very restricted diet as likely to prove highly prejudicial. Dr. Richardson's present dietary is sufficiently liberal, and besides meat, includes brown bread with plenty of fresh butter, macaroni and rice, potatoes sparingly, and at times a little dry fruit. Even a few glasses of champagne occasionally he does not find injurious.—*The Practitioner*, and *Dublin Journal of Med. Science* of April, 1872.

Sand-Baths.—*The Practitioner* of July has a translation, from German journals, of an article on the use of sand-baths, as practised at Dresden, and a few other places in Europe.

The sand-bath is applied either by allowing the sand to fall upon the body or by rubbing it into the skin, or by embedding the body in a mass of it; the sand is either warmed artificially or by exposure to the sun, and is either dry or moist. The amount of sand used for an adult in the sand-baths at Dresden is from ten to twelve eimer, and for a child, from four to six.

Dry sand contains more heat than an equal volume of water, and loses no heat by evaporation. The interchange of heat between the sand and the body does not take place with the same activity as between water and the body. According to Flemming, when the temperature of the sand is raised to 104° or 106° Fah., it seems at first cool, and, after a time, warm; the communication of heat obviously taking place but slowly. The bath is called warm when it is applied at a temperature of 117° Fah., or rather less; in the course of a day or two it can be borne three or four degrees higher, and ultimately 122° Fah. comes to be regarded as normal and pleasant.

There are, however, many exceptions to this rule. Irritable persons with sensitive skins, can only bear a lower temperature; others, again, with cooler, thicker and more œdematous skins, can support a temperature of nearly 130° Fah.; at least when the bath is applied to a part only of the body; and according to Cordes, when baths of from 90° to 120° Fah. are felt to be warm to the body generally, still hotter sand may be applied to painful limbs, or to parts locally affected.

A peculiarity of the sand-bath is, that different temperatures can be applied with ease to different parts of the body at the same time.

The sand is thus applied at the Dresden Institute:—A layer five inches in thickness is placed at the bottom of a zinc pan, or basin, and the patient is directed to lie upon it. If it is wished to give a half-bath only, the upper part of the body is covered with a linen

jacket. The attendant then pours over the extremities and pelvic region, avoiding raising a dust, a layer of sand to the height of five or six inches. Where the whole bath is taken, the abdomen and thorax are also covered to the depth of a few lines only. Absolute quiet must be maintained, or the sand will run off. Sturm applies cold water to the head, whilst the body is immersed in the sand; and subsequently directs an ordinary hot-bath of 100° Fah. to be taken. Flemming orders a shower-bath at a temperature of 74° to be taken; Cordes, a shower-bath or douche of soft or sea water of a lower temperature. The duration of the bath varies according to circumstances, from twenty-five to fifty minutes; half-baths may be prolonged to sixty minutes; most frequently, however, they are not employed longer than half to three-quarters of an hour. According to circumstances, again, the patient is bathed daily, or every other day; or for two days together, with an intermission then of one day. The duration of the whole bathing period or season varies from one to two months.

The physiological effects are, that after immersion or embedding in the sand for a period varying from five minutes to a quarter of an hour, the patient experiences a pleasant sensation of warmth. After a lapse of five minutes more, sensible perspiration appears on the uncovered parts of the body, which continues to increase to the end of the bath. Previous to the appearance of the sweat, the skin of these parts becomes somewhat reddened. On lightly dusting away the sand from the parts that have been covered, a layer several lines in thickness remains adherent. These parts do not feel much warmer, but turgescent. Thirst is experienced as a consequence of the sweating. At the end of a sand-bath of ordinary temperature and duration, repeated measurements have shown that there is an increase in the temperature of the axilla, amounting, in many instances, to only a few tenths of a degree, but in others to upwards of two or three degrees Fah. The number of the pulse increases from five to eight beats per minute. After a bath has lasted from twenty-five to thirty minutes, arterial pulsation is felt by many patients in different parts of the body.

The therapeutic employment of the sand-bath is recommended in cases where the activity of the skin is suppressed, as in Bright's disease; in articular rheumatism, sciatica, chronic gout, scrofula, and in rheumatic paralysis. It is remarkable and interesting that the Arabs take from twenty to thirty sand-baths in cases of syphilis, with sparing diet of bread and honey. The patient is buried to his neck in sand, in which he remains exposed to the sun for the whole day, and is allowed, towards evening, to take a little food. This burying is prolonged sometimes for a month.

Spina Bifida Cured by Repeated Tapping and Pressure.—At the meeting of the Lisbon Society of Medical Sciences, on Feb. 17th, Dr. Camara Cabal communicated a case of spina bifida which he had treated successfully.

The patient was a child, aged twenty-five days, which had in the lumbo-sacral region a swelling forty centimetres in circumference, seventeen in vertical, and ten in transverse diameter, and six in depth. It fluctuated, was transparent like a hydrocele, and appeared to contain not only a fluid, but some solid body. Pressure on it produced no convulsions, nor was there any paralysis or symptoms denoting lesion of the cord. It was therefore concluded that the tumor consisted exclusively of a hernia of the meninges, filled with fluid.

On Nov. 29th it was tapped with a Dieulafoy's trocar, and 400 *grammes* of transparent yellow fluid, containing an abundance of albumen, were removed. Compression was applied by means of adhesive plaster. No symptoms followed the operation beyond some vomiting and loss of appetite. Some days later, the tumor having enlarged, 250 *grammes* of liquid were removed; and on December 14th, 425 *grammes*. The defect, which was found to be in the situation of the fourth and fifth lumbar vertebræ, was gradually diminishing. On a fourth and fifth occasion puncture was performed at intervals of some days, the quantity evacuated being respectively 175 and 125 *grammes*, the fluid being more highly albuminous than before. After the last two operations there was some meningitis, which yielded to ordinary remedies. The child made a good recovery.

Hypertrophy and Lengthening of the Femur and Tibia in a Case of Syphilis.—At a late meeting of the *Société Médicale des Hôpitaux*, M. Guibout exhibited a patient from one of the wards of the Hôpital Saint Louis, suffering from tertiary syphilitic ulcerations, whose right lower extremity had undergone considerable lengthening. Both the femur and tibia were found to share in this increase, which amounted to at least two-thirds of an inch. M. Bergeron said he had seen an analogous hypertrophy of the bones of the leg in the case of a scrofulous patient.

Pepsine.—We have long been aware that most of the pepsine of commerce was obtained from the stomach of the pig, by scraping the mucous membrane of the fresh stomach with a blunt instrument after it had been roughly cleaned of its contents, the resulting mixture of mucus and gastric juice being dried and pulverized; but we never knew until lately that the manufacturer takes what might be thought an unfair advantage of the pig to increase the "yield" of this valuable article.

It is said that the pigs are kept for some time without food until their appetites are ravenous, when they are placed where the most savory meal is steaming under their snouts, but are prevented by mechanical obstacles from getting at it. Not only do their "mouths water," but a secretion of gastric juice, takes place in consequence of the mental impression, and it is during this condition that they are killed. The gastric juice, being free from food, is thus obtained in a purer state, and, it may be, in larger quantity than if taken from a stomach containing food.

A New Method of Nourishing Patients per Anum.—Dr. W. O. Leube, of Erlangen (*Deutsches Archiv für klin. Med.*) has made recent investigations on the nourishment of patients *per anum* with an injection-mass prepared in the following manner: With the object of introducing into the large intestine nutritive material resembling its ordinary contents, and of establishing, as far as possible, natural conditions in this part of the alimentary canal by artificially produced digestion, he has endeavored to transfer to the large intestine a part of the digestive processes which normally take place in the small intestine.

From 90 to 100 grammes of the pancreas of the pig or ox are carefully deprived of fat, and finely minced. Then from 150 to 300 grammes of beef are minced and grated. Both substances are then rubbed down in a mortar with some warm water, in order to form a thick soup, which is taken up into a clyster syringe, furnished with a wide opening. If it is wished to submit, at the same time, fat to digestion, from 25 to 50 grammes of this substance may be added. Starch likewise may be added. A purgative enema is to be administered one hour previous to this nutritive clyster.

His experience clinically in the use of this mode of feeding is as follows:—

1. The injected mass, when it consists of nothing more than meat and pancreatic substance, never causes any diarrhœa, but, on the other hand, generally remains in the large intestine from twelve to thirty-six hours without giving rise to a stool.

2. The patient experiences no disagreeable sensations after the injection, but rather a feeling of ease in the abdomen. In every case, he says he made out that the pulse became fuller, that there was an improvement in the general condition and spirits of the patient.

3. The clysters are not well borne at first; the least digested portion of the injected mass being returned.

4. The above-described injection-mass is superior to other substances recommended for rectal injections, through its efficiency, and the readiness with which it can be made.

Since the publication of the above paper by Dr. Leube the *Centralblatt für Med. Wissens'ft* of July 20th contains another article from him on the same subject, in which he says, that in the warmth of summer the pancreas begins very soon to undergo decomposition, and in consequence loses its digestive power and becomes irritating to the intestine, producing rapid expulsion of the material injected. These mishaps may easily be avoided by making a glycerine extract of the pancreas. This extract is quite equal in digestive power to the fresh pancreas, and will remain good for several weeks. The following is the manner of preparing this extract in glycerine. The pancreas of a bullock (which is sufficient for three enemata) is finely chopped and rubbed with 250 *grammes* of glycerine; and to each third of this, when about to be used, are added from 120 to 150 *grammes* of finely divided meat. It is important that this mass should be injected into the intestine as soon as it is made; for if it is allowed to stand, the meat swells and the operation is thereby rendered difficult.

The Necessity of abstaining from Surgical Procedures during Pregnancy and after Delivery.—Following the presentation on the 6th of March to the Société de Chirurgie of a tumor which M. Turnier had removed from a labia majora, and in connection with a discussion which resulted with regard to the influence of the pregnant state upon the growth of tissues, the following practical questions were brought to the notice of the Society.

1. Ought one to touch tumors or vegetations developed in the neighborhood of the genital organs during any period of pregnancy?

With the exception of M. Disprès, who does not hesitate to cut away and cauterize vegetations, the other members, including MM. Depaul, Guénoit, Verneuil, and Turnier, were opposed to any operative proceedings and advised obstruction. Except in the case where the vegetation acquires enormous proportions, and attains almost the size of the fœtal head, a growth of this kind ought not to be touched, for two reasons. In the first place, there is a risk of causing abortion; a simple cauterization sometimes sufficing to produce this result.

On the other hand, any use of cutting instruments is extremely prone to be followed by troublesome hemorrhage. M. Verneuil advises still greater reserve, and thinks that operations should not be performed upon any part of the body, excepting in cases of extreme necessity. Even when an abscess exists in a vulvo-vaginal gland, he considers it much safer to allow it to open spontaneously than to resort to the knife.

2. For how long after delivery ought we to defer an operation upon women either for removal of a tumor or the cure of a vesico-vaginal fistula?

It is above all things necessary that the tissues should be restored to their original condition, and that those which have undergone a kind of hypertrophy in all their elements should become supple, firm, and elastic. One ought to wait for three months, at least, before attempting the slightest operation; and the true limit has been correctly indicated by M. Guénoit, who waits for return of the menstrual function, until when, there is a risk of failure from the sutures coming away prematurely, in consequence of the excessive friability of the tissues, and a lessened vitality of the tissues acting as an obstacle to cicatrization.—*Gaz. Méd. de Paris*, November 13th.

On the Distinction of Edible and Poisonous Mushrooms.—A writer, under the initials W. G. S., gives the following concise account of the difference between the edible mushroom and the poisonous fungi resembling it. First and foremost, the true mushroom (*Agaricus campestris*) is invariably found among grass in rich open pastures, and never in or about stumps or in woods.

Many cases of poisoning have occurred, owing to the supposed mushrooms being gathered from stumps and in woods. It is true there is a certain variety found in woods and woody places (*A. salvicola*), but, as far as amateurs are concerned, it is best left alone. A second very good point is the peculiar intense purple-brown color of the spores (which are analogous to seeds); the ripe and fully matured mushroom derives the intense purple-brown color (almost black) of its gills from the innumerable presence of these spores. To see these spores, and to become acquainted with the peculiar color, remove the stem from a mushroom, and lay the upper portion, with the gills lowermost, on a sheet of writing paper; in a few hours the spores will be deposited in a thick, dark, impalpable powder. Several dangerous species, at times mistaken for this mushroom, have these spores umber-brown, or pale umber-brown in color, and belong to *Phaliota* or *Nebeloma*. There are innumerable varieties of the true mushroom (and of the horse-mushroom), but all are equally good for the table. Sometimes the top is white and soft, like kid leather; at other times it is dark-brown and scaly. Sometimes, on being cut or broken, the mushroom changes color to yellow or even bright red; at other times no other change whatever takes place. But observe, the mushroom always grows in pastures; always has dark purple-brown spores; always has a perfect encircling clothy color, and always gills which do not touch the stem, and a top with an overlapping edge.—*Half-Yearly Abstract, from the World of Science.*

Bichloride of Methyline.—Mr. F. Searle, in an article in the *Dublin Jour. of Med. Sci.* of February, adds his testimony in favor of this anæsthetic. In 1870 he administered it to more than 100 cases in the West of England Eye Infirmary, and has since used it in private practice. He has given it in all ages, from six months to seventy years, without a single cause for alarm, vomiting even being exceptional. It is important not to allow the patient to escape from its first influence, otherwise excitement ensues. In Padua bichloride of methyline has been employed in the surgical clinic to the exclusion of ether and chloroform, being obtained from London. Out of 108 operations performed under its influence, Dr. Rossi states that fifty-two slept tranquilly without any muscular agitation, within from one to five minutes; thirty-two experienced slight excitement, and became insensible in from eight to ten minutes; four only were violently agitated,

and sleep was not induced until fifteen to twenty minutes; twenty remained completely free from its influence even after fifty minutes of inhalation. Vomiting occurred in eight instances. No other accident declared itself, and the vapor excited no cough, but slight lachrymation. The pulse and respiration were increased in frequency from the first, but soon returned to the normal state, and even fell below it. The face underwent no change of color.

To the three *deaths* already recorded as happening under its use, must now be added another which occurred in the Radcliffe Infirmary, Oxford. Bichloride of methyline was administered in a flannel bag to a woman aged forty-four, who was about to undergo an operation for cancer of the breast. After two or three convulsive gasps the patient died, though the quantity administered was small.

The Administration of Stimulants.—Dr. Beale, in his lectures on the principles of the treatment of fever, says, if at the outset we have any reason to apprehend that an attack of fever is going to be severe, it is very desirable to administer small quantities of alcohol early in the disease. In this way the stomach may be accustomed to the remedy; whereas, if its use is postponed until the patient is very ill, and alcohol required in very large doses, the stomach is often in so highly irritable a state as to reject it. The patient's life may be in jeopardy for this circumstance, or fatal exhaustion may alone destroy him. Regarding the giving of alcohol to young persons the Doctor's conclusions are, in the main, not at variance with the opinions of those who advocate extreme temperance. His own experience leads him to believe that the majority of young healthy people would do well without alcohol; and he believes that the habitual daily consumption by young people—even of a moderate quantity—of wine or beer is quite unnecessary, and mere waste, while in some instances it is positively injurious to the health. At the same time there can be no doubt that in certain cases where the health fails in children, and even in infants, great benefits result from giving small quantities of wine daily for a short time. Hard-working people, students, professional men, and people actively engaged, have been advised to take stimulants, as a general rule—and some, no doubt, require them; but Dr. Beale believes many would enjoy very good health without any alcohol at all, while the recommendation that they should take plenty of claret or other light wine is bad advice for several reasons. In old age he believes stimulants to be really necessary, and sometimes are even more important than food itself. He feels sure that the life of many old people is prolonged by the judicious use of alcohol; and thinks that some who have been very abstemious all through life, take far too little stimulants when they grow old.—*Med. Times & Gaz.*

India-Rubber Cloth in Diseases of the Skin.—Since 1868, M. Hardy, of Paris, has been employing india-rubber cloth in place of poultices or local baths, the cloth being composed of a layer of caoutchouc adherent to a piece of cotton, and forming an impermeable tissue. This is only applicable to the limbs and head, and for the latter region he makes use of vulcanized rubber caps. After a certain time the part enveloped becomes not disagreeably warm, and then an abundant sweating takes place, under the influence of which, the crusts and scales which cover the skin are loosened, the epidermis spreads over the ulcers, and the skin becomes softened. The results obtained are similar to those obtained by poulticing, but, for many reasons, preferable. Daily experience in the Hôpital Saint Louis shows a great rapidity in the modification of the skin; two or three days of application suffice to completely clean the scalp when covered abundantly with scales of eczema, etc. After forty-eight hours' application of the rubber cloth upon hands affected with chronic eczema, with fissures and cracks in all directions, the wounds become cicatrized and the skin recovers its suppleness. This treatment is of greatest value in eczema during the second stage. Itching is rarely removed by this method. In ecthyma the pustules open, and the cure proceeds very quickly. A trial of oiled silk shows that it does not take the place of the india-rubber cloth. The limbs should be completely enveloped, but the cloth ought to be tied only at the ends, forming, between the ligatures, a large sleeve. It should be kept on for a considerable time, and the patient should be kept in bed. This method is also of service in psoriasis and chronic lichen.—*Jour. de Méd. et de Chir. Prat.*

Lymphatic Œdema.—Notwithstanding recent researches of Teichmann, Lebert, Virchow, and Vulpian, the pathological anatomy of elephantiasis is yet but little understood. For this reason, Dr. J. Renant (Interne of the Paris hospitals, etc.) publishes in the *Archives de Physiologie* a case which has come under his observation, hoping to draw attention to an anomalous form of the disease, characterized chiefly by a primitive alteration of the whole lymphatic system, and by a sort of chronic inflammation of the subcutaneous cellulo-adipose tissue. He also considers certain forms of lymphatic œdema, of which the history of the pathogeny and pathological anatomy is as yet incomplete. The patient acknowledged no hereditary disposition to the disease. He had always had good health until within six months; had never been out of France, and had lived, for the most part, in Paris; had never been in the habit of drinking, and had never had erysipelas. Six months before his admission to hospital his feet became swollen, the tumefaction extended to the legs and thighs, and at last involved the genital organs. On the supposition that the enlargement of the scrotum was a hydrocele, a physician had punctured it and produced a slight diminution of the œdema. The diminution was not permanent, and there soon appeared in the inguinal region prominent and knotted cords, converging towards the groin. These cords disappeared and reappeared several times, but within a month from his entry to hospital they became permanent. He now began to suffer from dyspnœa, and was obliged to stop work and enter a hospital.

At this time he could walk with difficulty, his face was commonly congested, his eyes prominent, his breathing rapid. Mentally he was not very intelligent, and was exceedingly irascible. Examination showed the existence of an enormous ascites, moist and sibilant râles in both lungs, heart enlarged and its beats doubled and regular. The appearance of the skin was characteristic, and pitted slightly on pressure. Sensibility was not impaired in the hypertrophied skin, and he occasionally suffered from pruritus. The patient became at length delirious, comatose, and died.

The case has several points of interest: the antecedents of the patient, the course of the disease, its short duration, the rapid generalization of the soft hypertrophy of the skin, and the localization of the true elephantiasis in the genitalia. These would naturally tend to separate the disease from exotic elephantiasis—a disease having a longer course and characterized by successive attacks of erysipelas. Sclerema of adults differs no less, being an affection of which the principal symptom is a chronic irritation which is productive of an increase in the subcutaneous adipose tissue. The sclerema of infants (*œdème dur*) perhaps resembles it more closely.

The general dilatation of the lymphatic canals commenced in the coats of the connective tissue, extended beyond the hypertrophied glands, and showed itself above by the varicose lymphatics, and permits us to suppose that the absorbent system was very rapidly involved. The ascites was produced by the mechanical pressure of the tumefied mesenteric glands, as was also the alteration of the liver. The hypertrophy of the heart appears to be, above all, exaggerated by the influence of this double obstacle to the circulation which existed, for there was no valvular lesion or trace of endocarditis. (It is probable that the man had primarily an enlargement of the heart, which might truly be considered as the determining cause of the future changes.)

It has for a long time been known that obstacles to the flow of the lymph could produce œdema, and especially that elephantiasis of a limb could follow induration or suppuration of its glands. Bichat said long since: "In all these cases one finds the absorbents very much dilated in the cadaver, and they are, moreover, filled with fluid. The production of œdema of lymphatic origin is not so rare a circumstance as may have been supposed. I have in the last two years had occasion to observe a great number at the Hôpital Saint Louis, in the service of Dr. Lailler. Following a very acute eczema of the hands, attended with considerable local tumefaction; sometimes, also, consecutive to inflammation of subcutaneous serous bursæ; also, very often around vessels thus engorged one finds an induration which extends like a net, two, three, and even four centimetres laterally. It seems very probable that this form of lymphangitis (*L. valvulaire, Bazin.—L. en table, Lailler*) is due to an extravasation of coagulated lymph into the perivascular tissue, and which seems quite analogous to that which we have called *pachydermic éléphantiasis.*"

Cephalæmatoma.—At a recent meeting of the Roxbury Medical Society, Dr. Garceau (*Boston Med. and Surg. Journ.*, July, 1872) reported a case of two congenital tumors of the head observed upon a child, being of the class known as *cephalœmatoma, tumeur sanguineuse*, or *thrombus neonatorum*, and situated over each of the parietal bones. There is a wide difference of opinion as to the propriety of attempting any surgical interference with these formations. In the present case the tumors were laid open with a bistoury; their contents, when evacuated, were found to consist of a liquid having the color and consistency of blood, but which, however, did not coagulate upon being allowed to stand. The contents having been entirely removed, the precaution was taken to apply a steady pressure to the seat of the swellings, inasmuch as they are otherwise apt to re-form within a few hours. With regard to the frequency of cephalœmatoma, Dr. Garceau said that it was of rare occurrence, one case being met with in 500 to 1,000 children. He had seen five cases in all. In four cases he had operated as above; of these, three made a good recovery, while in one instance the parts suppurated, and death ensued at the end of a fortnight. In the case of one child it was found impossible to obtain the consent of the parents to an operation; here convulsions appeared, and death took place on the fifteenth day after birth.

Collodion in Herpes Zoster.—Dr. Wesley M. Carpenter, of Erieville, Madison Co., writes:—

"I would call the attention of the profession to the use of collodion in this disease. It may have been noticed before this, but I have not happened to see it if such is the case.

"One of the most distressing symptoms in this disease is the intense stinging, burning, superficial pain which often accompanies the eruption. I have no reference to the so-called 'characteristic pain,' which may continue a long time after the disappearance of the eruption.

"Great relief may be given to this burning pain by the application of collodion to the surface occupied by the vesicles. This may be done with a feather or camel's-hair brush. The collodion forms a pellicle over the surface of the vesicles, which protects them from the air, and renders them less liable to rupture. It may be applied at any stage of the eruption, and in most cases acts like a charm in giving relief to this annoying accompaniment.

"In general the disease needs no other local treatment."

Local Application in Small-Pox.—In the Small-pox department of the Boston City Hospital, sulphuret of lime has been used extensively for local application, and patients are sponged with it two or three times daily; it cools the surface and relieves all itching, and patients frequently call for it, although the odor is rather unpleasant. When desquamation has commenced, the following application is made two or three times daily:—℞. Acidi carbol. crys. ʒ ij.; Glycerinæ, Ol. olivæ, āā ℥ ij. M. This softens and relieves all tension of the skin, and the crusts are allowed to fall off without any desire on the part of the patient to aid the process by scratching. After the crusts have fallen off, the patients are allowed to bathe their faces frequently with some alkaline lotion, generally of sodæ bicarb.—*Boston Med. and Surg. Journ.*, July 18, 1872.

The Relation of Impetigo Contagiosa to Vaccinia.—Henry G. Piffard, M.D., of New York (*N. Y. Med. Journal*, July, 1872), confirms his discovery of a purely vegetable organism, the presence of which afforded a reasonable explanation of the undisputed contagiousness of this affection, by the examination of crusts from three additional cases, in all of which bodies identical with those described were found. The remarkable fact that impetigo contagiosa does undoubtedly, in a very large number of instances, develop itself as a sequela of vaccination, as exhibited in the recorded experience of Fox and others, as well as of himself, has led him for some time to suspect that there existed some closer connection between the two than mere coincidence. Upwards of twenty vaccine crusts were examined by the microscope, and in every instance fungoid bodies, similar to those observed in impetigo contagiosa, were found, with the sole difference that in vaccine crusts the fungus was more abundant and more luxuriant than in the majority of crusts derived from the other affection. These bodies do not resemble those observed by Salisbury, and termed by him *Jos vacciola;* nor any of the fungi obtained by Hallier in his experimental cultivations of vaccine lymph, nor the fungus described by Kohn, and met with by him in the examination of impetigo contagiosa. From the thin, hair-like character of the filaments and the circumstances of their habitat, he suggests the name *Leptothrix vaccinalis* as an appropriate designation. In concluding, he observes:—Impetigo contagiosa, differing as it does in many important particulars from the eruptions with which we are most familiar, has undoubtedly, in many instances occurring after vaccination, been regarded as syphilitic, to the alarm of the patient, the annoyance of the vaccinator, and the chagrin of the physician who endeavors to remove it by internal medication. On the other hand, its general recognition as a parasitic affection, its trivial importance, and its ready curability by appropriate external applications, such as the application of a mild mercurial, sulphur, iodic, or carbolic ointment,

will enable us to calm the fears of the patient, to reassure the vaccinator, and to silence one more of the many objections which have been raised against the practice of vaccination by the prejudiced and unthinking.

Mono-bromate of Camphor in Delirium Tremens.—Allen McLane Hamilton, M.D., of New York (*New York Med. Journ.*, July, '72), attests the value of this remedy in cases of *mania à potu*. In one case the pills were prepared after this prescription:—R. Camphoræ monobromat. ʒ j.; confectio rosæ, q. s. M. ft. massa and divide in pil. No. xij. He has tried this remedy in chordee, and is convinced that it excels any combination of camphor and opium.

Movements of Rotation on Removal of the Brain.—The advanced views on the Phenomena and Movements of Rotation consecutive upon removal of the brain, by M. Onimus (*Revue des Cours Scientifiques*), is translated by C. N. Hammond, and published, with illustrations, in the July No. of *The Journal of Psychological Medicine*. He shows that, in animals deprived of their cerebral lobes, the integrity of the movements is perfect; that it is due to the action of the centres of locomotion, which, when put in motion, is inevitable, and always the same after certain excitations; moreover, that in these conditions there is a forced and complete responsibility of the movements, and a necessity for the limbs all to concur to maintain the equilibrium; finally, that the movements of rotation are due to some disturbance in the equilibrium which exists between these different centres of locomotion.

Theomania.—Allen McLane Hamilton, M.D., of New York (*Journ. Psychological Medicine*, July,'72), relates a genuine case of this disease which was under his care, and shows that clergymen are rarely the victims, as would naturally be supposed. It is among the minds of low order, the inhabitants of the country, and the attendants at "camp meetings," "love feasts," and "revivals," that the disease is most frequently seen. The large cities are comparatively exempt; there other subjects craze instead of religion.

Pain.—F. E. Anstie, M.D., London, in his recent work on "Neuralgia and the Diseases which Resemble It," speaks thus of pain:—1st. Pain is not a true hyperæsthesia; on the contrary, it involves a lowering of true function. 2d. Pain is due to a perturbation of nerve-force, originating in dynamic disturbance, either within or without the nervous system. 3d. The susceptibility to this perturbation is great in proportion to the physical imperfection of the nervous tissue, until this imperfection reaches to the extent of cutting off nervous communications (paralysis).

Is Insanity on the Increase?—Geo. Fielding Blandford, M.D., of St. George's Hospital, London, in a letter to *The Journal of Psychological Medicine*, July, 1872, speaks of Dr. Maudsley's conclusions on this subject:—1st. There is no satisfactory evidence of an increase in the proportion of occurring cases of insanity to the population, and no evidence, therefore, of an increased liability to insanity. 2d. It is not necessary to assume such an increase in order to account for the undoubted great increase in the number of registered insane persons. 3d. The difference between one insane person in 812 of the population (English) in 1844, and one in 400 in 1870, is mainly if not entirely owing to the fact that in the former year the returns included only half the existing insane persons in the country, while in the latter year nearly all of them have been registered. 4th. Some part of the difference is owing to the fact that certain patients are registered as lunatics now who would never have been thought so in times past. 5th. A lower rate of mortality and a lower percentage of recoveries may account for a part of the increase in the total amount of insanity. 6th. The proportion of admissions to the population, which represents approximately the occurring cases of insanity, does not, when the necessary allowances are made, yield evidence of any serious increase.

The Inter-dental Splint.—A serious case of fracture of the lower jaw, successfully treated by the inter-dental splint, is reported by Harrison Allen, M.D., Surg. to the Phila. Hospital (*Phila. Med. Times*, July 15, '72). The inventor of this variety of splint was Dr. Gunning, of New York. The inflammation attending exfoliation in this case, would have prevented the employment of a chin-cap and bandage. It will be remembered that Dr. Gunning employed the same method of treatment in the famous case of Hon. Wm. H. Seward.

Gastric Tubuli.—At the June meeting of the Biological and Microscopical Section of the Academy of Natural Sciences, Philadelphia, Dr. Hunt called attention to a specimen he had arranged beneath one of the microscopes, exhibiting a transverse section of some of the gastric tubuli of the pig's stomach, remarking that it was still a mooted point whether two sets of glands did exist in the stomach; and although he had of late years made numerous investigations for the purpose of determining this question, he did not as yet feel satisfied in regard to it, although so far at least he had been unable to detect more than one kind of these glandular organs.

Dr. Tyson stated that the literature of the subject, which he had recently had occasion to consult, was very much involved, and that he believed a rich field was open for research in this direction.—*Phila. Med. Times*, July 15, '72.

Coal-Oil as a Derivative in Congestion.—D. T. Gilliam, M.D., Nelsonville, Ohio (*The Clinic*, July 20, '72), has for some time been in the habit of using this article with success, as a counter-irritant and derivative in many internal congestions and inflammations, and especially in diseases of the throat and air-passages, and in inflammation of the lungs. Its action consists in its steady, even, gradual influence over the circulation. It is not uncertain, like poultices, though more efficacious. His method of using it in congestion of the lungs, is to envelop the thorax in woollen cloths saturated with coal-oil, and allowing it to remain a sufficient time. In cases of children he sometimes envelops the entire body in the saturated flannel cloths, but it is more necessary here to watch its effects, as in one case vesication of a large portion of the surface resulted from its too long continuance, though the vesicles were comparatively painless and healed rapidly upon being sprinkled with flour.

Poisoning by Morphine.—W. W. Grissom, M.D., St. Louis, Mo. (*St. Louis Med. and Surg. Journal*), relates a case of poisoning by morphine, and recovery after six and a half hours artificial respiration. The patient was a married woman, aged 31, and weighed 160 pounds. Within two hours the attendant, by mistake, gave twelve teaspoonfuls of the following prescription, received from her physician, or six grains of morphia:—R. Sulphate morphia, gr. viij.; hyd. chloral, ʒ j.; aqua camphor, ʒ j.; syr. simple, ʒ j. M. Take teaspoonful every hour until sleeping.

The editor remarks that the above case suggests the importance of persevering with *artificial respiration* as long as action of the heart can be perceived; also, it suggests particular caution to make *gentle pressure* on the chest, lest a fatal pneumonia be induced.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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PREVALENCE OF PYÆMIA AND ERYSIPELAS IN BELLEVUE HOSPITAL.

At the regular meeting of the Medical Board of Bellevue Hospital, on the 29th of June, a report was submitted from a committee appointed to examine into the relative prevalence of erysipelas, pyæmia, etc., in Bellevue Hospital during the past year, as compared with former years, and to suggest the means of preventing the recurrence of these diseases. This committee consisted of Drs. Sands, Crane, Janeway, and Gouley, of the hospital staff. From this report, which was accepted and submitted to the Board of Commissioners of Public Charities and Correction, we make the following extracts. The facts reported by said committee were taken from the hospital register and not from notes of cases, and are therefore but aproximative in the case of erysipelas, since the tabulated ones are those only in which the disease was either present on the patient's admission, or in which it had an unfavorable termination. Cases of erysipelas complicating wounds or other injuries, and terminating in recovery, would not be found recorded in the register. The number of cases of erysipelas, therefore, which have been treated in the hospital during the period mentioned, must be considerably larger than that which appears in the report.

In collecting the cases of pyæmia this source of error was avoided, inasmuch as this disease being uniformly fatal, almost every case must have been entered in the register as a cause of death. There is reason to suspect, however, that owing to the imperfect manner in which pathological inquiries were made in former years, a certain number of cases of pyæmia were overlooked, having been neither recognized during life nor detected on post-mortem examination. Such cases would therefore be recorded under a false name in the hospital register, and would not appear in the table reported.

Table No. 1 shows the absolute frequency (as nearly as is attainable) of erysipelas and pyæmia from 1861 to 1871, inclusive, and their relative frequency in the several years, as compared with one another in the same year.

Table No. 1.

Years.	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	T'tl.
Erysipelas	61	51	109	100	88	87	30	52	97	76	100	852
Pyæmia...	20		10	11	10	5	14	33	14	37	39	193

Thus it appears that the greatest number of cases of erysipelas (109) occurred in 1863, and the smallest number (30) in 1867. The cases which have occurred during any one of the three years immediately preceding the present one exceed in number those of any previous year, except in 1863 and 1864.

Pyæmia, when occurring, reached its minimum in 1866, and its maximum in 1871. In the former year we find 5, and in the latter year 39 cases.

In 1861, 20 cases appeared, while, strange to say, not a single case is recorded in 1862, although in that year the cases of erysipelas are no less than 51. There is probably an error here, some cases of pyæmia having been classified under the head of erysipelas. The past four years exhibit a considerably larger number of cases of pyæmia than the four preceding years. Thus the cases from 1868 to 1871, inclusive, amount to 113, while those from 1864 to 1867, inclusive, amount to only 40. This marked difference may be explained partly by the inaccuracy of the records above referred to; but the unfavorable inferences which it suggests will be further modified by statements presently to be made respecting Table No. 3, which gives the ratio *per centum* of cases of pyæmia to cases of open wounds admitted. Nevertheless it must be acknowledged that the figures present a greater prevalence of pyæmia in recent than in former years.

Table No. 2 shows the relative frequency of occurrence of erysipelas and pyæmia during the different months of the year, as deduced from the records of the hospital for the time mentioned.

Table No. 2.

Months.	Jan	Feb	Mch	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	T'l.
Erysipelas	87	75	110	123	122	68	49	32	23	40	63	67	859
Pyæmia...	12	13	19	23	32	30	20	11	14	17	9	19	219

From this table it appears that erysipelas has been most prevalent during the months of March, April, and May, and least so during the months of August, September, and October. It is generally believed that this disease prevails to the greatest extent in the spring and autumn. Such a belief seems warranted by the figures given, as far as they relate to the spring, but not as far as they relate to the autumn months.

Pyæmia is shown by the same table to have prevailed to the greatest extent during April, May, and June, and to have been least prevalent during August and November.

Table No. 3.

Years.	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	Total
Erysipelas	29	60	44	48	21	26	10	11	21	12	22	307
Pyæmia	10		4	5	3	2	5	7	3	8	9	59

Table No. 3 exhibits the percentage of cases of erysipelas and pyæmia to cases of open wounds admitted during the period of eleven years before mentioned. Erysipelas reaches its highest figure in 1862, and its lowest in 1867. Pyæmia gives the highest percentage in 1861, while, as before mentioned, it does not appear at all in the records of 1862. The percentage of erysipelas has been less in the last five years than in the five years preceding; that of pyæmia, on the other hand, has been greater. The highest percentage, however, is noticed in 1861, when no less than ten per cent. of all the cases of open wounds admitted terminated in pyæmia.

A source of error in the preparation of the above table deserves careful mention. The open wounds recorded in the register are simply those admitted as such; and no account is taken of wounds resulting from surgical operations. The number of the latter is considerable, and, if collected, would, of course, cause a corresponding reduction in the percentage of pyæmia during the years mentioned. Moreover, it is well known, that within the past five years a much larger number of surgical operations have been performed than in the earlier years. If this fact is considered, and if due allowance is made for the increasing number of compound fractures and other severe injuries that have of late years found admission into Bellevue Hospital, the high rate of pyæmia in recent, as compared with former years, may to a great degree be explained.

On reviewing all the facts which have been presented, it would seem that both erysipelas and pyæmia are, and have been for a long time, quite prevalent in this hospital, and that the latter disease still remains what it has always been—the bane of surgical practice.

In reply to the request that the committee would suggest such measures as will prevent, if possible, the recurrence of these diseases in the future, they say:—"In the present state of surgical science the hope of completely eradicating these diseases is vain and illusory. When typhus and typhoid fever, scarlatina, and measles can be prevented, we may, perhaps, expect also to prevent erysipelas and pyæmia; but even this is uncertain.

"The prophylactic measures to be recommended against erysipelas are such as relate to the general hygienic management of the hospital. Cleanliness, good ventilation and drainage, and careful nursing are all important. Cases of erysipelas should be isolated, and separated by as great a distance as possible from other patients."

"After indicating improvements which might be made in all the above particulars, in the case of the hospital in question, the Committee go on to say:—

The prevention of pyæmia is to be aimed at in a similar manner to that of erysipelas. The preventive measures may be considered under two heads:—1st. Those which relate to the direct management of the patient; and 2d. Those which relate to hospital hygiene.

"1st. The direct management of the patient. This is deemed to be of great importance. It is too often asserted that pyæmia is a disease unknown except in hospitals, where it owes its origin to impure air generated by the overcrowding of patients. It is undeniable, however, that the disease is encountered not only in badly ventilated hospitals, but in those the ventilation of which is perfect. Further, it is not confined to hospitals, but is occasionally seen in private practice, where the surroundings of the patient are all that could be desired. That view of the etiology of pyæmia which refers it invariably to hospital miasm is erroneous, and is calculated to exert an injurious influence on surgical practice, by leading to the neglect of those means which are useful in warding off the disease in any given case. It is well known that, although the pyæmic poison may be generated in any open wound, it is most apt to be found in wounds which contain large accumulations of solid or fluid animal matters undergoing putrefaction. By scrupulous cleansing of the wounds, the liberation of pus and other fluids, and the local application of carbolic acid, chloride of zinc, or other disinfectants, the patient's chances of escaping the disease are undoubtedly greatly increased. By close attention to these acknowledged rules of surgical practice we may often succeed in preventing the occurrence of pyæmia in those who would otherwise fall its victims. The antiseptic treatment of open wounds, although not necessarily according to the methods so highly vaunted by Mr. Lister, deserves, in the opinion of the Committee, to be recommended for general adoption.

"The investigations of Dr. Janeway show that in nearly every case of pyæmia the element of thrombosis plays an important part in its causation. The tendency to coagulation of the blood in the veins may be favored by anything that lowers the action of the heart—by feeble circulation resulting from hemorrhage, either primary or secondary, or from some intercurrent affection, such as erysipelas, cellulitis, dysentery, pneumonia, etc. The same circumstances, combined with the process of putrefaction, favor the softening of the coagula, and their transportation to distant parts, where they become the foci of multiple or metastatic abscesses. The simple enumeration of these facts is sufficient to

show how liable to pyæmia must be the class of patients admitted into the hospital, whether suffering from severe injuries or submitted to grave surgical operations.

"2d. There remain for consideration only those measures for the prevention of pyæmia which are connected with hospital hygiene. While it must be admitted that many cases of pyæmia are due to causes unconnected with hospital influences, the latter are believed to be, under certain circumstances, powerful in causing and disseminating this disease. Although not contagious, in the common acceptation of the term, Pyæmia is, doubtless, not infrequently conveyed from one patient to another through the medium of an atmosphere contaminated by emanations from the wounds of pyæmic patients, and, there is reason to think, sometimes by emanations proceeding from suppurating wounds occurring in persons who may not be the subjects of this disorder. An atmosphere rendered thus impure, is capable of exciting those peculiar changes in the wounds of those persons exposed to it on which the production of pyæmia essentially depends. It is sometimes observed, also, that cases of pyæmia occur in rapid succession, and after operations of a trivial character; and that the disease diminishes in frequency immediately after the patients suffering from accidental wounds, or from those caused by surgical operations, are separated from one another, and placed in a healthy atmosphere."

The lesson taught by these facts is a plain one. Every outbreak of pyæmia should be regarded as a warning. The patients, when seized with the disease, should be removed at once, and the ward in which the disease originated should be emptied and thoroughly cleansed and disinfected. Indeed, frequent cleansing of the ward and changing of the bedding would, doubtless, often prevent the occurrence of both pyæmia and erysipelas. To do this work efficiently, the number of patients in the hospital would have to be reduced, so that several of its wards might be kept empty from time to time, as circumstances might require it.

In closing their report, the Committee state, that they have endeavored to give a simple and direct answer to the questions submitted for their consideration. They are not unmindful of the fact, that the inmates of the Bellevue Hospital are chiefly paupers, and that in such an institution the perfection of arrangements which is observed in those independently endowed must not be expected. How far the improvements suggested may be practicable, is a matter for the Commissioners, and not the Committee, to determine.

A comparison of the totals exhibited by Tables 1 and 2 will show that there are other sources of error than the ones indicated by the committee, which would warrant a more careful revision of the tables and the data upon which they were constructed than they appear to have had from the gentleman who receives the thanks of the committee for his valuable aid in the preparation of them.

We fail to perceive what warrant the committee have for expressing the belief that Bellevue Hospital "will compare favorably with many other similar institutions, both at home and abroad, in regard to the frequency of occurrence of the diseases specified," unless it be a general impression founded upon an unrecorded experience, which can hardly be accepted at the present day as reliable.

Dr. T. K. Cruse, late House Surgeon of the Hospital, seems to have been more strongly impressed with the mortality resulting from pyæmia than the committee; for in his article on "The Treatment of Compound Fractures of the Leg at Bellevue Hospital," which appeared in THE RECORD of May 1st *ult.*, he states that "Bellevue Hospital has reached a period in its existence when, in the words of Billroth, the building is a mere slaughter-pen of the wounded. Spite of the most careful and judicious sanitary arrangements, recovery from an amputation of the thigh for injury is without the recollection of the oldest inhabitant; and when the surgeon finds pyæmia follow exsection of the elbow, and in fact the most trifling operation whereby the medullary canal of a bone is in any wise invaded, he is sorely tempted to refrain from interfering in such cases, not willing to subject himself to the imputation of hastening a termination which he knows must be death, whatsoever course be followed."

It appears to us fairly a matter of regret that a hospital capable of furnishing the profession such valuable statistical tables as Bellevue could do, should be so poor in histories of the surgical affections treated within its walls, that the only evidence to be obtained of the amount of work done by its staff during any specified time has to be mainly derived from the record of admissions and copies of death certificates.

To the credit of the Commissioners be it said, that since their attention has been called to this lamentable condition of affairs, hospital tents have been erected on the ground between the hospital and the river, and into them have been placed some of the surgical cases most likely to be benefited by such change.

The Commissioners have also fitted up the barracks on Hart's Island for the reception of convalescent patients, thus enabling them to reduce somewhat the number of inmates in Bellevue. Furthermore, Professors Chandler, Doremus, and Draper have, at the request of the Commission, carefully examined and reported upon proper measures for extirpation of animal and vegetable poisons in the hospitals and other public institutions of the Department, which report has entered quite fully into the questions of ventilation, warming, etc. Certainly it cannot be said that the Commissioners show a disinclination to do all that is within their power to improve the condition of the inmates of our public hospitals. It remains to be seen how effectually these efforts will be directed and sustained on the part of the Medical Board.

ADVERTISING SPECIALISTS.

The Michigan State Medical Society has adopted a resolution favoring the insertion of the advertisement of the cards of physicians and specialists in the secular papers. Although nothing more is allowed than the mention of the name, specialty, and office address, we fail to see how the public can, in the majority of instances, draw the line between legitimate medicine and quackery. This provision is evidently for the benefit of the specialists in the State, and especially for such as have not proved their competency to their legitimate judges—the profession at large. Physicians as a class are discriminative enough to judge whether or not a specialist, so called, is to be trusted with their patients, and sensible patients are very apt to ask their family medical advisers before consulting strangers. It is by such recommendations that specialism has thriven, and competent practitioners in any particular branch have never wanted patients when they have proved themselves worthy of them. If a specialist wishes to advertise himself as such, let him convince the profession of his qualifications by suitable contributions to medical journals, and by original investigations in his particular branch. If we step aside from this rule and indorse such brazen individuals who can advertise themselves in no other way than by the insertion of their cards in the medical journals or secular papers, we rob legitimate specialism of its well-deserved laurels, and encourage every misguided and presumptuous pretender who may desire to trade upon our charity, or upon the public's credulity.

TO IMPROVE THE AMERICAN MEDICAL ASSOCIATION.

The *Boston Medical and Surgical Journal*, in commenting upon our recent editorial article on the failure of the American Medical Association to represent the American Medical Profession, offers some very valuable suggestions which deserve consideration. They may be embodied in the following: I. That all the legitimate business, scientific and professional, everything in fact in the interests and needs of the profession throughout the Union, be intrusted to a National Council, limited in membership and composed of two elected from each State by a State Council; the term of these National Councillors being six years. II. These National Councillors should be chosen by a State Council which might be constituted and elected as follows:—Each State Society to elect one member from each Congressional District, each to hold office for three years. This State Council could act as a State Committee in performing the preparatory work of the National Council, and might meet (we presume) immediately before or after the State Societies, individual members of the National Council being invited.

"The numbers in the several State Boards would be sufficiently large and well proportioned. For a national council seventy or eighty, thus selected, would be ample; and the length of the term of service would enable them to preserve a continuous and consistent plan of work, while half of their number, coming new every three years, would prevent any lapsing into indifference or negligence. The influence of the State Councils, as indicated, most fully impressing their own wishes and the wishes of their immediate constituents on individual National Councillors would, through the National Board, give a voice to the profession such as was never before known."

This plan is an original one, and has very many features which commend it to the many who are seeking for reform.

HOSPITAL APPOINTMENTS IN PHILADELPHIA.

Our esteemed contemporary, the *Philadelphia Medical Times*, has expressed itself very strongly in favor of the appointment of proper persons for Hospital positions. By this it would appear that very much the same influences control these appointments as in our own city. The Editor says:—

"And yet, while we will not say that the skill of the candidate is entirely overlooked, it cannot be denied that it has occasionally happened that other circumstances have been allowed to have at least equal weight with the managers. It would not be difficult to prove that political influence has been freely used in some of the canvasses for medical positions that have taken place recently in this city, and in cases where this would be of no avail, that the successful applicant has resorted to arguments founded upon the family, social, or business connections of the managers. If the hospital is under the exclusive control of a religious body, it would appear that sectarian feeling is appealed to; for it is difficult to explain in any other way the fact that the greatest number of the medical officers of the Episcopal Hospital are Episcopalians, and that Presbyterians predominate in the recently appointed staff of the Presbyterian Hospital.

"We are happy to think that in many cases the choice of an attending surgeon or physician has been made solely with reference to his qualifications for the post; our object in calling the attention of the profession to this subject is to induce it to exert whatever influence it may possess to bring about such a state of sentiment in the community that it will be made impossible for managers ever to elect physicians to positions of trust or profit whose attainments do not clearly entitle them to such an honor, or capriciously to dismiss those who have served an institution faithfully. And this, we think, can best be accomplished by the profession securing for itself representation in the managing Boards of all institutions in which it is in any way interested."

DR. THOMAS E. SATTERTHWAITE AND THE IRON CROSS.

The profession of this city will be gratified to learn that one of their own number, Dr. Thomas E. Satterthwaite, has received from the Emperor William, through the German Ambassador, the decoration of the Iron Cross, in consideration of his services in the field and in hospitals during the Franco-German war. Dr. S. entered the German Army as Assistant Surgeon in August, 1870. In the following October he was promoted to the position of *Ordinirender Arzt*, with the

rank of Captain, and placed in charge of a hospital in Toul, where he remained until the close of the war. It is always pleasant to notice such occurrences, reflecting as they do upon the honor of the profession and of the individual; but it is particularly so in the case of Dr. Satterthwaite, whose peculiar merit has been so signally rewarded. In the name of the profession of the city and country we congratulate him.

Reviews and Notices of Books.

A Treatise on the Diseases of Infancy and Childhood. Second Edition, Enlarged and thoroughly Revised, by J. Lewis Smith, M.D., Curator to the Nursery and Child's Hospital, New York; Physician to the Infant's Hospital, etc., etc. Philadelphia: Henry C. Lea, 1872, pp. 741.

After the very flattering notices which the former edition of this work received, not only in our own, but also in foreign journals, but little need be said to assure the student or practitioner that the book will serve him as a reliable guide in the treatment of the class of affections which will form such a large proportion of his practice. The years of experience which Professor Smith has had in institutions for the care of infants and children in New York City, and the unusual facilities which he has possessed for becoming familiar with the pathological appearances of disease; his methodical habit of making notes of all that comes within the range of his observation; and the characteristic impartiality with which he considers his subject, renders him especially fitted to speak with authority upon the questions involved in such a treatise.

The effort has been made to render the book more complete than before, by treating of nearly twenty diseases more than were included in the previous edition. Among these may be mentioned the Diseases incidental to Birth; Rachitis; Tuberculosis; Scrofula; Chorea; the various forms of Paralysis, and Intermittent, Remittent, and Typhoid Fevers. Many new formulæ which experience has shown to be useful, have been introduced; portions of the text of a less practical nature have been condensed, and other portions, especially those relating to pathological histology, have been rewritten to correspond to recent discoveries. As it is, the size of the volume has necessarily been augmented by more than one hundred pages. Those unfamiliar with the book will be surprised at the number and completeness with which references to other authorities are introduced, without, at the same time, destroying the personal character of the work.

Certain affections, such as Cyanosis, Intussusception, etc., to which the Professor has given an unusual amount of study, are treated at somewhat greater length than will be found to be the case in other treatises of the same size; but this does not appear to have been done at the expense of other matter. We wish that all authors were as faithful in the revision of their work as seems to have been the case in the present instance. It might have been well, if the occasion of a second edition had been taken to make certain corrections in style, were it not that, on the other hand, it is commonly safer, as regards perspicuity, that an author should feel at liberty to say what he wishes in the way that seems the most natural to himself.

The Chronic Diseases of Women: with Special Regard to their Treatment in Creuznach. By Louis Michels, M.D., member of various learned Societies, Knight, etc. Second improved edition. Berlin: 1872. Trübner & Co., 60 Paternoster Row, London.

This is an English version, made and printed in Germany for an English publisher. The volume is a thin octavo of seventy-five large-print pages. Manifestly the space allowed is quite insufficient for a treatise on the diseases of women, and the attempt should have been to lay before the reader simply the data for a fair appreciation of this valuable medicinal water. More than half of the little volume, however, is given to a description of the diseases, which are very singularly arranged. This description contains nothing new or particularly valuable, is generally borrowed from Scanzoni, and is given with the uncertainty and timidity of a writer who, not professing to be himself an expert, leans upon the diagnosis and pathology of others. On the other hand, the proper duty of exploiting a particular mineral water is very imperfectly done. No analysis of its chemical constitution is given, no comparison with other waters drawn.

The cases cited are not very fully detailed, and in all of them the ordinary routine of uterine treatment seems to have been employed in conjunction with the use of mineral waters, not exclusively those of Creuznach.

The resultant impression from this little volume is, that these waters, in virtue of the iodine, bromine, iron, and soda which they contain, are valuable adjuvants to the ordinary hygienic and therapeutic treatment of uterine disase.

The Mother's Register: Current Notes of the Health of Children. The Mother Records for the Physician to Interpret. From the French of Prof. T. B. Fonssagrives. New York: John Ross & Co.

These are twin volumes—one for boys and one for girls; neat little books of about fifty pages, containing blank schedules, upon which every important fact of vital history may be recorded and kept. They are edited by a layman and designed to pass into the hands of mothers; but they are thoroughly in the interest of the child, and (which is the same thing) of physiological science and its professional exponents.

The great value of such records would be very apparent to any careful physician called to advise a child in a family previously unknown to him. Here he would find a conspectus of all the influences which had shaped and qualified the organism of the patient; facts of heredity, consanguinity, intra-uterine life, birth, nursing, weaning, constitutional and accidental disease, temperament, habits, and education. It may be said that the idea is Utopian, that the records would never be kept. Doubtless this is true for the very large majority of mothers. But now and then would be found one who would delight in such a service. Could any number of such filled records be collected they would furnish invaluable aid to the students of statistics. Even if these extremely well devised and elaborated tables fail of these their primary uses, wherever they go they will enhance respect for a profession which searches with so minute a scrutiny so many fields of inquiry, and will give a larger idea of the complex conditions and forces which make individual life and development what it is in any given subject.

We mean to distribute this book among the best mothers in our flock, and would urge others to do the same.

AUTUMNAL CATARRH (Hay Fever). With three maps. By MORRILL WYMAN, M.D., late Hersey Professor Adjunct of the Theory and Practice of Medicine in Harvard University. New York: Hurd & Houghton, Riverside Press, Cambridge. 1872. Pp. 173.

In its mechanical execution this monograph is worthy of the established reputation of the Riverside Press. It is not equally creditable to the Riverside proof-reader, as many textual inaccuracies witness: page 116, paragraph "Pneumonia." Neither can we believe that the treatise itself will at all enhance, *among his peers*, the reputation of the Adjunct Professor in Harvard University. Indeed we lay down the book with an indefinite but disagreeable impression that it was not written for the profession at all. In this matter it has much the same flavor that belongs to Henry Bennett's recent book on Consumption, and the medical lucubrations of the Autocrat of the Breakfast-table.

It would seem as if the author's eye wandered from the profession and was filled with the public. The book is largely made up of the history of cases furnished by non-professional subjects of the disease. Thus we have the ponderous jeremiad of the "immortal Daniel" Webster, the sprightly persiflage of our clerical humorist Henry Ward Beecher, letters from lawyers and clergymen, literary men and women, describing with tedious minuteness the *subjective* phenomena of the disease. The personal history of the author appears with these, and is neither better nor worse than the rest. There is little attempt at analysis or classification of these cases,—little research or speculation as to the essential nature of the affection. There is nothing in the book which is not quite level with the appreciation of the ordinary well-educated layman, while the maps and intineraries, list of hotels, etc., etc., suggest the idea that we have here a hand-book for the traveling public. Early in the book we are asked to believe that we are indebted to Dr. Wyman for the recognition of this quite common disease. Page 2 we read: "I had long been a sufferer from this disease, but have never yet met with a description of it in any medical work. In 1854 it was described by me in my lectures in the Medical School of Harvard University, etc., etc."

The Lectures of Watson (edition of 1845) describe the Catarrhus Æstivus, and quote Bostock (1819), and Elliotson (1836). It is described by earlier authors as Catarrhus Æstivalis.

The author continues: "Of the physicians to whom I applied very few had met with, or ever heard of the disease, and doubted its existence, except as an ordinary catarrh." This measure of ignorance and incredulity must, we think, be predicated of the latitude of Boston. Our own experience warrants us in asserting, that in New York the disease was fully and quite generally recognized among the profession before this date. The "rose cold," the "hay cold," and the "peach cold" are household words, of venerable antiquity. Page 6 the author declares that he proposes "to give the natural history of this singular disease," and he does it very well, after the model of Linnæus, not Jussieu. He counts the sneezes and the tears, but shows small interest in the intimate physiological conditions which produce them. Five pages are given to the nose-symptoms, four pages to the eye-symptoms, and four pages to the chest-symptoms. They read a little like as many pages from Jahr's Manual. When a classification is attempted it is on the basis of most exoteric particulars—sex, date, age, etc.

The chapter on Geographic and Chorographic Relations is well done, and the best in the book. It is singular, however, that so little allusion is made to the great sanitarium of the United States, the elevated (6,000 ft.) plateau, which skirts the eastern base of the Rocky Mountains.

In a recent visit to Colorado the writer heard it constantly affirmed, and never contradicted, that all the forms of summer catarrh were unknown there. This observation, however, comes from the laity, and must be so esteemed.

In the chapter on causes we have in a foot-note brief allusion to Claude Bernard's experiments in sections of the sympathetic nerve, and the meagre suggestion that it would not be difficult to run a parallel between the symptoms resulting from such sections and the phenomena of this kind of catarrh.

Later, we have a sketch of the germ theory, which makes the disease to depend upon the multiplication of cryptogamic growth in the various respiratory passages, with allusion to the views of Helmholz, Bastian, and Tyndall. These views are very interesting, and it is difficult to withhold credence from the statements of such a man as Helmholz. To our own mind, however, a single fact militates very broadly against this view of cryptogamic origin, viz.: the extreme abruptness, almost instantaneous, of the invasion and resolution of the disease in some cases. Thus of two persons, apparently similarly affected, travelling from a catarrhal locality to a non-catarrhal, one will lay off all the symptoms with his travelling coat, and with the other they will persist indefinitely. The conditions for cryptogamic growth must be nearly, if not quite, the same for both. Moreover, we have not known any notable advantage to follow the use of the quinine solution, the carbolic acid solution, and the sulphurous acid solution, each of which we have prescribed since reading Binz's researches.

The chapter on the causes of paroxysms is interesting, particularly the observations on the Ambrosia Artemisiæfolia or Roman Wormwood. The chapter on diagnosis is elaborated beyond the needs of the practitioner. From the section on prognosis, the sufferers under this malady, so pathetic in its appearance, will be comforted to learn that, on the whole, it does not seem often to induce other diseases, or of itself to shorten life. And it will exasperate the sufferers aforesaid, that a Harvard medical professor, who has contended in personal conflict with the disease for forty years, can do no better than to sum up his treatment in six apothegms, viz.: 1st. Remain in a non-catarrhal region during the critical period. 2d. Strengthen the system by food and tonics. 3d. Avoid smoke, dust, night air, and noxious vegetables. 4th. Dress warmly, with flannel next the skin!! 5th. For the cough, mild narcotics. 6th. For the asthma, smoke stramonium.

Against No. 4 in this category we enter protest. In several cases we have found that the symptoms were greatly aggravated by a perspiring condition of the body. The thinnest possible under-clothing, and the frequent use of the *cold* bath, affording more relief than any other measure employed.

Nothing is said of the value of chloral and nitrite of amyl, by the aid of each of which the paroxysms have been, in such cases as have recently come under our notice, greatly relieved. If the book was indeed written for the people rather than the profession, this economy of medical resources is explained, and is very wise. Briefly we may say, that if we could have written this book, we would not.

CORALS AND CORAL ISLANDS. By JAMES D. DANA, LL.D., Professor of Geology and Mineralogy in Yale College, etc., pp. 378. New York: Dodd & Mead, Publishers.

A COMPLETE and popular American work of this char-

acter has long been needed to give the scholar and casual reader an insight into the intricate formation, by the coral-makers, of coral reefs and islands situated in different parts of the world. The author has spared no pains in working up the subject, which is not new to him. During four years, from 1838 to 1842, he was connected with the Wilkes Exploring Expedition around the world, which did so much for the advancement of the science of Geology.

No other work on the subject at all approaches the researches of our author, with the exception of the English Report on "Coral Reefs," in 1842, by Mr. Charles Darwin, noted during the years 1831 to 1836, in the voyage of the *Beagle*, under Captain Fitzroy. The conclusions arrived at by both authors were in many respects identical. Prof. Dana remarks: "The principal points of difference relate to the reason for the absence of corals from some coasts, and the evidence therefrom as to changes of level, and the distribution of the oceanic regions of elevation and subsidence —topics which a wide range of travel over the Pacific brought directly and constantly to my attention."

One-third of the book is taken up with an instructive history of the corals and their organizers, with their subdivisions; and those who have believed that the whole subject was attended with mystery may especially thank our author for these succinct paragraphs:—

"Coral is made by organisms of four very different kinds. These are:

"*First.* Polyps, the most important of coral-making animals, the principal source of the coral reefs of the world.

"*Second.* Animals related to the little hydra of fresh waters, and called hydroids (a division under the Acalephs), which, as Agassiz has shown, form the very common and often large corals called Millepores.

"*Third.* The lowest tribe of Mollusks, called Bryozoans, which produce delicate corals, sometimes branching and moss-like (whence the name from the Greek, for *moss animal*), and at other times in broad plates, thick masses, and thin incrustations. Although of small importance as reef-makers at the present time, in a former age of the world—the Palæozoic—they so abounded over the sea-bottom that some beds of limestone are half composed of them.

"*Fourth.* Algæ or sea-weeds, some kinds of which would hardly be distinguished from corals, except that they have no cells or pores."

Chapter II. is devoted to the notices of various coral islands and their peculiar structure, such as: Maldive Archipelago; Great Chagos Bank; Jarvis' Island; Birnie's and Swain's Islands; Honden, or Henuake; Otuhu, Margaret, Tehu, Washington Island, Enderbury's Island; Metia, etc.; Taiara, Sydney's, Duke of York; Fakaafo; Ahii; Rarada; Kawehe; Manhii, Aratica, Nairsa or Dean's. His description of the Florida Reefs and Keys, Bahamas, Salt Key Bank, and Bermuda or Somers Islands, with soundings between Florida Reefs and Cuba, are "household words" to those who, like us, have been amateur explorers and residents of this particular section of our country, so rich in the various coral specimens.

In chapters III., IV., V. and VI. the formation and geographical distribution of coral reefs and islands, with causes of their features, and changes of level in the Pacific Ocean are discussed, with valuable geological conclusions.

In taking leave of Professor Dana's elaborate volume, we cannot but express our thanks to the publishers for the mechanical ability displayed in its publication It is elegantly bound, and printed on clear white paper, in unusually large type, and accompanied with two hundred and eighty-four fine illustrations and maps—more than half of which were engraved from the plates of the author.

Correspondence.

CANCER DOCTORS.

To the Editor of the Medical Record.

Sir—The Court, at its recent session in this village, was occupied in the consideration of a case of "irregular practice"—a case presenting so many salient points that it seems worthy of a place in the Record.

It appears that in November, 1871, Mrs. Mary Murdock applied to Alexander McDonald, a reputed "cancer doctor," for the treatment of what was thought to be cancer of the breast. After blistering the surface, McDonald applied a "cancer plaster," an article made by himself. On the evening after the application, Mrs. M. was taken with burning pain in the stomach, constriction of the throat, vomiting, and other symptoms of poisoning, the symptoms growing rapidly worse. On the third day a physician was called, but the patient sank rapidly, and on the fourth day she died.

The coroner was called, who made a post-mortem examination in presence of several physicians. The stomach, part of the breast, and a portion of the "cancer plaster" were sent to Prof. Porter, of Albany, who made a careful examination of the same.

He detected arsenic sufficient, in his opinion, to produce death. The portion of diseased breast examined bore no evidence of cancerous growth, but was considered to be but a harmless tumor.

In January last McD. was indicted for manslaughter in the fourth degree. His trial took place here last week. On the trial it was admitted, on the part of the defendant, that he was ignorant of the nature and appearance of cancer; that he could not distinguish between a cancer and a harmless tumor; that he did not know that arsenic might be absorbed into the system—unless applied to cancer—so that a small quantity might produce death; that he had no knowledge of medicine; and that in preparing his famous plasters he *guessed* at the amount of arsenic he put into them; and yet he sold them to people as ignorant as himself, who said or thought they were afflicted with cancer.

The cause of the woman's death seems to have been clearly established; the defendant's incapacity to practise the healing art was fully admitted. The judge instructed the jury, that if the defendant assumed to treat cancers, he must possess ordinary medical skill on that subject; and that if he did not possess such skill the jury should find the defendant "guilty;" and yet the enlightened jury brought in a verdict of—"not guilty."

In view of all the facts, this verdict was, at the least, extraordinary. The grounds of it are not apparent. It may be conjectured that the jury meant it as a warning to the unwise and over-credulous, that if they employ ignorant quack doctors they must do so at their own risk.

Perhaps the "twelve good men and true" were touched with compassion for what counsel termed "an honest, but ignorant old man." The honesty of attempting to practise medicine while wholly ignorant of its first principles, dealing out virulent poisons and thereby endangering health, even life itself, is not evident to common observers. Ignorance may not be a crime in private life, and it is not often put forth as a

qualification by those charlatans whose circulars are filled with wonderful cures of patients "given up by all the regular doctors;" but it is criminal when it seeks honor and emolument by assuming the office of the learned and the wise.

BENJAMIN EDSON.

COOPERSTOWN, July, 1872.

CONCERNING MEDICAL DIPLOMAS IN CALIFORNIA.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR—In the MEDICAL RECORD for June 15 is a letter from Osaca, Japan, signed R. T. Hayes, M.D., stating that the writer has lately met with an instance showing "the laxity of the Pacific Medical Schools in sending forth upon the world incompetent physicians with flaunting diplomas;" the instance being that of a young English physician whose credentials he had been called upon to examine, and whom he had found in possession of a diploma from the Medical Department of the University of the Pacific. "On inquiry," adds Dr. Hayes, "I ascertained that one year before, this person was a clerk in a drug store in Yokohama, that he was absent from Yokohama but a few months, and returned a full fledged M.D."

Having been the Dean of the Medical Department of the University of the Pacific when the diploma in question was issued, you will permit me to explain that the "young" man mentioned is Dr. James Gye, aged about thirty-four years, and married; that he attended a course of lectures at King's College, London, in 1858; that he went to China in 1859, and served in the dispensaries at Whampoa, Hongkong, and Shanghai, until May, 1866; that he then went to Nagasaki, Japan, where he practised medicine in connection with a drug store until April, 1870, when he was burned out, losing all his property; that he then accepted the appointment, for a voyage, of surgeon of the P. M. S. S. *Golden Age;* and that he afterward came to San Francisco and requested to be examined for a degree. Having been assured of the foregoing facts by his own declaration under oath, which was confirmed by testimonials from respectable medical practitioners and by other testimony, and having evidence also of his honorable deportment and good moral character, the Faculty agreed to admit him to examination before completing his attendance on a final course of lectures, and to grant him a diploma, *if he were able to pass a rigid examination.* He was subjected to an examination, both oral and written, each professor devoting to it from one to three hours, the result proving satisfactory. That he had served in a drug store, which is the only objection made to him by Dr. Hayes, the Faculty considered in the light of a recommendation. We have every reason to believe that he is fully qualified to practise medicine, and that the profits of a few years of practice will give him a respectable position even in the estimation of his enemies, if such there be.

Dr. Hayes adds, "Two similar instances are within my knowledge, one of the parties residing at San Diego, the other at Santa Barbara." This statement is also, to say the least, incautiously made. There is at neither of these places a graduate of the Medical Department of the University of the Pacific,—the only school named by Dr. Hayes.

I may add that there is not the least ground for charging the medical schools of California with laxity in "sending forth upon the world incompetent physicians with flaunting diplomas." On the contrary, the greatest care has been exercised in this respect; and the Faculties of the two schools are proud to point to their graduates, and to compare them with those of the Atlantic colleges. In the fourteen years since the first school was founded, the whole number of California graduates has not been over a hundred,—less than one-third as many as obtain degrees in the city of New York alone in a single year. At this rate it would require nearly half a century to send forth from our schools as many doctors as are turned out in New York City in a single winter.

It is notorious here that there is more difficulty in getting a diploma in California than there is in New York, and that several students who have failed here, have succeeded elsewhere without adding to their stock of knowledge.

Yours truly,

HENRY GIBBONS, JR., M.D.

SAN FRANCISCO, July 29, 1872.

MEDICAL THERMOMETRY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—If thermometry be of any advantage to the clinical physician, it is highly important that his instrument should be as accurate as possible. It is well known that the thermometers in general use vary not a little—indeed it is almost impossible to obtain two instruments that will denote precisely the same temperature under similar circumstances.

Some time ago, becoming dissatisfied with the instruments I had been using, I purchased of an old and leading house in this city two thermometers which were represented as being of their own importation and of Casella's manufacture.

Although the thermometers contained no mark designating the manufacturer, I relied upon the knowledge and veracity of the gentlemen of whom I purchased them.

I subsequently showed the instruments to a thermometer-maker, who informed me that they were not Casella's make, and he very much doubted whether they were even imported.

Upon my charging the firm from whom I obtained them with such misrepresentation, they replied that the thermometers were genuine Casella instruments.

In order to remove the doubt I wrote to Mr. Casella, and received a reply in which he states that he would not make a thermometer that did not bear either his name or his number, and that said thermometers could not possibly be his.

I desire to call attention to the fact that a great many instruments are sold under the name of Casella which were not made by him. I am informed that this gentleman never "points" his medical thermometers until they have *seasoned* six months; this time being required to guard against inaccuracies which would otherwise occur. This tedious process accounts for the high price of his instruments, but it enhances their value, and the medical man is sure of a faithful record of temperature.

Every instrument that Casella makes is marked with his name and number—either one or both; all others are counterfeit.

SAML. WHITALL, M.D.

607 LEXINGTON AVE., June 13, 1872.

CHRONIC CYSTITIS.—PERINEAL CYSTOTOMY.

To the Editor of the Medical Record.

Sir—In the 15th July number of your Journal, Dr. Charles K. Briddon remarks:—

"Cystotomy, and by that I mean cutting into the bladder, was proposed some years ago by Prof. Willard Parker, as a remedy for those intractable cases of chronic cystitis that refuse to yield to other means. I am not aware that it has been done on the male. I do not think the wound could be kept open long enough for the bladder to recover itself without the assistance of a canula, which would not be tolerated in an inflamed organ."

It will be of interest to Dr. Briddon and perhaps to others to know that this operation was done by me, precisely as he states it, in May, 1869, and was briefly reported to the Georgia Medical Association. The report of the case may be found in the current June number of the *Medical Companion*, Atlanta, Geo. If Dr. Briddon will furnish me his address, I will with pleasure forward him the notes of the case.

In my case the operation being, as I supposed, yet untried, was reserved for a last resort; and was done only when the patient seemed near his end. It was thought to be fully justifiable at the time as a palliative measure to relieve the sufferings of the patient, which had become continuous and very excruciating.

The relief afforded was immediate and most gratifying. Life was prolonged for eighteen months, and was for the most part comfortable and enjoyable. For a time hopes were entertained that the proceeding would prove curative rather than palliative merely, as had been previously contemplated.

The inflamed bladder tolerated the "canula" (india-rubber tubing) admirably; indeed, so great was the relief afforded by it to the patient, he made little or no complaint of the presence of the tube or any irritation from it. The fistula left on its removal gave him an option either to evacuate the urine *per urethram* in the standing posture, or by the fistula, in a squatting position, at his pleasure; and this privilege he esteemed so highly that he would not contemplate the closure of the fistula under any circumstances. By voluntary muscular power he could control the escape of urine by the fistula.

So well satisfied am I with the experience of the one case, I shall not hesitate to do the operation earlier when suitable opportunity offers, in the expectation that it may prove curative.

In conclusion, I may remark that I have found no local wash in these cases at all comparable to solutions of chlorate potassa.

Robert Battey, M.D.

Rome, Ga., August 6th, 1872.

THE LATEST FROM PARIS.

The following extract from a letter just received from a student now at work in the Paris hospitals contains some interesting points, which, by the kindness of the gentleman to whom they were written, are herewith furnished to the readers of the Record:—

Dear Doctor, etc.— . . . . . in order to keep you posted in what is going on here I will devote the rest of my letter to medical news. Richet has had a well-marked case of the rather unusual affection, hemorrhoidal dilatation of the urethral veins in the female. He considers the causes of this affection to be, first, retention of urine, and consequent inflammation of the neck of the bladder and urethra, which seems to me to be putting the cart before the horse, for he gives no cause for the retention; and second, pressure of the uterus upon the neck of the bladder, either by displacement of the former organ or during pregnancy. The latter is perhaps the most active of all causes.

A bluish circle around the meatus urinarius, caused by venous congestion, is one of the earliest signs of pregnancy. If this congestion be pushed a step further the vessels are liable to become varicose, in the same way as do the veins of the cervix uteri and of its canal during pregnancy. None of these conditions have any relation with varicose veins elsewhere, either in the rectum or on the leg.

The symptoms of hemorrhoids of the urethra are: spasm of the vesical sphincter, with retention of urine (partially voluntary on account of pain); excessive pain on attempting to pass a sound, the spasmodic contraction of the urethral muscles resisting the entrance of the instrument; the appearance of blood at the end of the stream every time that the urine is voided, and the grasping of the sound by the urethral muscles both in introduction and withdrawal. The appearances of the part are, however, characteristic. The meatus is situated in a projection instead of a depression, and a fleshy growth seems to be jutting out from it. This growth, however, differs from polypus in not being pedunculated, but being continuous all around the urethra, in a sort of a fringed manner, all of which fringe possesses the purple hue of enlarged veins covered by mucous membrane.

The consequences of such an affection left untreated were represented to be dilatation of the bladder and atony with cystitis.

The treatment is simple and effective. First, dilatation of the urethra, and then excision of the varices at three segments of the circle of the meatus, taking away in all about one-half of the mucous membrane of the orifice of the canal; each portion snipped away comprising one-eighth of the whole circumference. The bleeding is arrested by the pressure of a sound with cold, and if necessary persulphate of iron, while the process of repair obliterates the remaining varicose vessels, and leaves a meatus which is large enough for all purposes, and does not tend to contract inordinately.

Richet uses this same method in his treatment of anal hemorrhoids, except that he includes his three segments containing the offending vessels in a clamp, and burns them off, contending that the amount of healthy tissue left prevents any subsequent stricture.

Legros, Robin's "préparateur," is very enthusiastic over the treatment of rectal hemorrhoids by galvano-cautery. He punctures the hemorrhoids in many places with the heated needle, and believes that while the subsequent inflammation is less than after the ordinary means of disposing of hemorrhoids by operation, still it is sufficient to shrink up and cause the entire disappearance of the varicosities.

On the subject of scars Robin differs from the German authorities, and does not admit that the new skin is formed by proliferation of the epithelium at the borders of the wound. He believes that it is impossible for the cells to grow so rapidly, and thinks that the skin is formed by the birth of young cells in the exudation from the granulations, which is, to that extent, a blastema. In support of his theory he refers to the cicatricial spots which often form in the centre of an ulcer, and also to the re-creation of the epithelium of the mammary glands, all of which is lost during lactation.

Hardy is making a great cry about the use of the cardiograph in distinguishing, in doubtful cases, between aortic aneurism and insufficiency of the aortic valves. Although it is not yet plain to me why any difficulty of diagnosis of such a sort should exist, still Hardy says that the point is, that in the descending trace of the cardiograph with aortic aneurism the natural curve (with the "plakan") is made, while with aortic insufficience the descending link of the trace is almost absolutely straight.

In the way of histology Frey now positively asserts (which has been long suspected) the existence of cylindrical epithelium around the blood-vessels of the Malpighian tuft in the kidney, inside of and distinct from the pavement epithelium lining the capsule itself.

In a recent monograph on the kidney, by Gros, of Strasbourg, it is stated positively that albumen is poured out into the Malpighian capsule by the blood-vessels of the tuft and reabsorbed by the capillaries which surround the uriniferous tubules. No proof is given. Frey's latest edition says that these capillaries take up part of the water which has been poured out into the Malpighian capsule.

. . . . . .

Yours, &c.,

L. A. Stimson.

ARMY AND NAVY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 5, 1872, to August 19, 1872, inclusive.

Edwards, L. A., Surgeon.—By S. O. 187, War Department, Adjutant-General's Office, August 13, 1872, leave of absence further extended thirty (30) days.

Brooke, John, Assistant Surgeon.—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Camp San Juan Island, and ordered to Sitka, Alaska, for duty as Post Surgeon.

Phillips, H. J., Assistant Surgeon.—By S. O. 84, Department of the Columbia, July 24, 1872, relieved from duty at Sitka, Alaska, and ordered to report in person to the Medical Director of the Department.

O'Reilly, R. M., Assistant Surgeon.—By S. O. 71, Military Division of the Missouri, August 3, 1872, leave of absence extended thirty (30) days.

Carvallo, Carlos, Assistant Surgeon.—By S. O. 184, Adjutant-General's Office, August 9, 1872, leave of absence extended fifteen (15) days.

Girard, A. C., Assistant Surgeon.—By S. O. 140, Headquarters Department of Texas, August 10, 1872, granted leave of absence for thirty (30) days on Surgeon's certificate of disability.

Wilson, A. D., Assistant Surgeon.—By S. O. 151, Department of the East, August 12, 1872, to report to the Commanding Officer, Fort Warren, Massachusetts, for temporary duty.

Official List of Changes of Stations and Duties of Officers in the Medical Corps of the United States Navy.

Hugg, Jos., Surgeon.—Ordered to the U. S. R. S. New Hampshire, Norfolk, Va.

Bradley, Geo. P., Assistant Surgeon.—To the U. S. S. Canandaigua.

Jones, M. D., Assistant Surgeon.—To the U. S. S. Benecia.

Corwin, Wm. A., Assistant Surgeon.—Detached from the U. S. S. Benecia, and waiting orders.

Aulick, H., Assistant Surgeon.—Detached from the U. S. S. Portsmouth, and waiting orders.

Tarewell, Wm. G., Assistant Surgeon.—Detached from the U. S. S. Portsmouth, and waiting orders.

Martin, H. M., Assistant Surgeon.—To the Naval Hospital, Washington, D. C.

Medical Items and News.

Difference between Male and Female.—What difference is there between a man and a woman? Ans. *A vas deferens!*

Royal College of Surgeons, London.—At a meeting of the Council of the College, held July 11th, Mr. Henry Hancock, Surgeon to the Charing Cross Hospital, was elected President, in the vacancy caused by the retirement of Mr. George Busk, F.R.S.; and Messrs. T. B. Curling and F. Le Gros Clark were elected Vice-Presidents. Mr. Holt, of the Westminster Hospital, the recently-elected Councillor, took his seat. Messrs. Erasmus Wilson, T. Holmes, and W. H. Flower were re-elected Professors of Dermatology, Surgery, and Comparative Anatomy, respectively; and Dr. Humphry, Lecturer on Anatomy and Physiology. During the collegiate year 1871–72, 349 new members were admitted, against 291 last year, showing an increase of 58.

The Miller Prize.—Dr. J. Leland Miller, of Sheffield, Mass., offers a prize of one hundred dollars to the members of the Massachusetts Medical Society for the best essay on "Accidental Poisoning," considered in its broadest application.

Dugong Oil.—Attention has been recalled, by the contents of the Queensland Annexe at the International Exhibition, to the medical uses of dugong oil. It has been declared by more than one medical practitioner, following Dr. Holt, of Brisbane, to possess all the nutritive properties of cod-liver oil, and to be equally useful in all the forms of tuberculous and wasting diseases which are benefited by the administration of cod-oil; it is alleged to possess an actually agreeable flavor, to be pleasant as an article of food, and to be acceptable to those whose stomachs reject cod-oil. At a recent dinner in the Annexe, the pastry was made with dugong-oil, and was pronounced to be excellent.—*Br. Med. Jour.*

Directions for Bathing.—The Royal Humane Society has issued the following instructions: Avoid bathing within two hours after a meal, when exhausted by fatigue, or from any other cause; when the body is cooling after perspiration; and altogether in the open air if, after having been a short time in the water, there is a sense of chilliness with numbness of the hands and feet. Bathe when the body is warm, provided no time is lost in getting into the water. Avoid chilling the body by standing undressed on the banks or in boats after having been in the water. Avoid remaining too long in the water—leave the water immediately there is the slightest feeling of chilliness. The vigorous and strong may bathe early in the morning on an empty stomach. The young, and those who are weak, had better bathe two or three hours after a meal—the best time for such is from two to three hours after breakfast. Those who are subject to attacks of giddiness or faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should

not bathe without first consulting their medical adviser. —*Ibid.*

Parisian Hospitals.—The question whether the new Hôtel Dieu is to be used for hospital purposes or converted into a building for the city government, has been decided by the municipal council in favor of the former course; but instead of the 800 beds which were to have been the limit of its capacity, only 460 are to be provided, and certain changes are to be made in the original plan. The Hôpital Berck, which was built on the sea-shore for the accommodation of strumous children, has also proven an "elephant," for, besides the very considerable expense of its construction, the municipal council have just been obliged to appropriate 25,000 francs to works intended to protect it from invasion by the sea.

Yellow Fever at the Narrows.—The Spanish iron-clad frigate *Numancia*, seven days from Havana, arrived in the Narrows, entrance to New York Harbor, August 12th, with eighteen well-developed cases of yellow fever on board, which were removed to the Quarantine Hospital at West Bank. For one week previous to August 14th, one death had occurred daily.

Medical Department of the University of Pennsylvania.—The Catalogue and Announcement of this college for the one hundred and seventh session, 1872-3, alludes to the unequalled advantages for medical students, by its extensive "Wistar and Homer Museum," and Cabinets,—the former having been founded nearly one hundred years ago,—and the University and Hospital Clinics. Over 4,000 patients were treated at the Medical Dispensary service of the University of Pennsylvania during 1871. At the Surgical Clinic, under the direction of Prof. D. Hayes Agnew and Dr. Garretson, 2,115 cases were under observation during the year past, and over 600 operations were performed within the last six months. Those students who have attended two full courses on subjects which form a scientific basis for medicine, given during the spring and summer by the Auxiliary Faculty, and passed a satisfactory examination upon them, receive the degree of Ph.D. (Doctor of Philosophy).

Canada Medical and Surgical Journal.—This is the title of a new monthly journal, the first number of which appeared in July. It is published at Montreal, and edited by George E. Fenwick, M.D., formerly the senior editor of the *Canada Medical Journal*. The late corresponding editors, Drs. D. McNeill Parker, W. Canniff, and Wm. Bayard, of the *Canada Medical Journal*, are associated with Dr. Fenwick in the new enterprise. The new journal bears also a close resemblance to the *Canada Medical Journal*. An instructive paper on "The Science of Meteorology," by Mr. Thomas D. King, of Montreal, is published in the August number.

Death of a Canadian Professor.—William Fraser, M.D., Professor of Institutes of Medicine, McGill University, Montreal, died July 24th, 1872. He was an attending physician to the Montreal General Hospital since the year 1847, was appointed a Professor in the University in 1849, and two years ago was an active agent in resuscitating the Medico-Chirurgical Society.

In Paris 21,958 babies were "farmed" out last year.

Cholera Infantum in Boston, Mass.—Of 220 deaths in Boston for the week ending July 27th, 95 were from cholera infantum—being 43⅛ per cent. of the whole.

American Pharmaceutical Association.—The twentieth annual meeting of this Association will be held in the city of Cleveland, September 3d, 1872, commencing at 3 o'clock P.M. It is proposed to have an exhibition of objects relating to pharmacy, and all articles for exhibition are to be delivered, free of expense, to the local secretary, H. C. Gaylord, 110 Monument Square, Cleveland, Ohio, on or before September 1st.

New York Board of Pharmacy.—Mr. William Neergaard was elected President of this new Board, and Dr. F. H. Weismann, Secretary. The Board meet at the rooms of the College of Pharmacy on Mondays, Tuesdays, Thursdays, and Fridays, from 2 to 5 o'clock P.M., for the purpose of registering those who are "Graduates or Licentiates in Pharmacy." Up to the 20th of July 250 persons were registered, of whom the majority were engaged in business on their own account.

Homœopathy.—I. T. Talbot, M.D., President of the American Institute of Homœopathy, in his annual address, at Washington, D.C., May 21st, 1872, stated that fifteen years ago the whole membership of the Institute was but three hundred and twenty-five. Now it has upon its roll the names of more than one thousand physicians in active practice. Then, the yearly transactions were included in a pamphlet of eighty pages. Now, they annually fill a volume of six or seven hundred pages. There are at present twenty-one State societies, and sixty local and county societies. But while homœopathy has made progress in Great Britain, it has, during the past year, met with a sad loss in the death of its distinguished advocates. Among these is Professor Henderson, of Edinburgh, who died April 1st, 1872. In closing, the speaker spoke as follows: "Homœopathy is not confined to the most enlightened countries. It is making its way, steadily and surely, to the more obscure and darker places. Asia, Africa, Australia, and the Hawaiian Islands, all welcome the dawning of the new (?) medical light."—*The New England Med. Gazette.*

New York College of Pharmacy.—During the 43d annual course of lectures at this College, commencing October 7th, six prizes, of from $50 to $100, will be offered to the most proficient students.

The International Ophthalmological Congress.—The *British Medical Journal* gives a report of the Ophthalmological Congress which convened at the Royal College of Physicians in London, on Thursday, August 1st. The evening before, a meeting for the arrangement of preliminaries had been held, at which the attendance was very considerable, the ophthalmological talent of France, Germany, Italy, Spain, England, and other European countries, and America, being well represented; the business, besides admitting members and issuing cards, consisting mostly in the interchange of courtesies, and introductions. The following gentlemen are named as having been there present:—

Drs. Agnew and Roosa, of New York; Dr. Rider, of Rochester; Drs. Thomson and Dyer, of Philadelphia; Dr. Green, of St. Louis; Dr. H. W. Williams, of Boston; Dr. Buller, of Canada; Dr. Pagenstecker, of Wiesbaden; Dr. Michaelis, of Berlin; Dr. Hess, of Mayence; Dr. Vogelsang, of Hannover; Drs. Galezowski and de Wecker, of Paris; Drs. Drewer and Deloppez, of Brussels; Dr. Bribosa, of Namur; Dr. Woixon, of Moscow; Dr. Gama Lobos, of Rio de Janeiro; Dr. Grosse, of Adelaide; Dr. Roberts, of Sydney; Dr. Mannhart, of Florence.

The practical difficulty presented itself at the outset in securing intelligible communication between the members, many of whom were only acquainted with their own language; and it was agreed, as the most fa-

vorable compromise, to conduct the business, as far as possible, in the French language, which plan, on the whole, appears to have worked well. The arrangements included, during the first day, a visit to the Ophthalmic Hospital, Moorfields, in the morning at 9 o'clock; the meeting of the Congress from 11 to 1 P.M., and from 3 P.M. to 5 P.M.

During the afternoon the Central London, the South London, the Royal Westminster, and the Western Ophthalmic Hospitals, as well as the ophthalmic departments of the General Hospitals, were open to the members of the Congress.

One of the most important features of such a meeting, viz., the social gatherings, seem not to have been neglected. Mr. Bowman gave on Thursday evening a brilliant *conversazione* to a most distinguished assemblage of the members of the Congress, and many leading metropolitan and provincial medical men and others.

On Friday evening Mr. Critchett extended his hospitality to a like assemblage at a *soirée musicale;* and on Saturday the Congress wound up with a dinner at the Crystal Palace.

Thursday, August 1st.—The Congress opened at 11 o'clock. Mr. Critchett was voted to the Chair, and, speaking in French, said that when at Heidelberg, last year, he had proposed that the International Ophthalmological Congress should so far depart from arrangements previously made as to hold its next triennial meeting in London. This proposal he made on behalf of himself and colleagues in London; it had been enthusiastically received; and he had no doubt that the meeting now commenced would be successfully carried through, and would materially contribute both to the advancement of their science, and to the promotion of good feeling and fellowship. Mr. Critchett then nominated, amid much applause, Mr. Donders as President of the Congress; Dr. Williams, of Boston, and Dr. Warlomont, of Brussels, as Vice-Presidents; and Messrs. Zehender and Soelberg Wells, as Secretaries.

Mr. Donders, on taking the Chair, made a few remarks, after which he nominated the following honorary Vice-Presidents: Messrs. White, Cooper, Critchett, Bowman, Quaglino, Zehender, and Cervora.

Several papers were read in English, but the French language was most generally used.

The following papers were read at the morning sitting: On the Use of Ether in Ophthalmic Surgery, by Dr. Joy Jeffries, of Boston; On the Surgical Treatment of Optic Neruitis, by Dr. de Wecker, of Paris; Sympathetic Ophthalmia, by Dr. Warlomont, of Brussels.

The Congress met again at 3 P.M.; the President in the Chair. Mr. Bader proceeded to show several cases—one of Photophobia, treated by sulphate of quinine; and two of Conical Cornea, that had been operated on successfully. The remainder of the sitting was mostly occupied in reading and discussing papers on the Extraction of Cataract; the papers being contributed by Messrs. Taylor, Bribosa, Warlomont, and M. Hansen, of Copenhagen.

The following are some of the papers read at the sittings of Friday and Saturday:—

Mr. Bowman. 1. On New Methods of Dividing the Iris. 2. On New Methods of Excising Structures in the Pupillary Region. 3. On some New Instruments for the Treatment of Lachrymal Obstructions. 4. On some Uses of Eye Trephines, and on New Forceps for certain Purposes. 5. On Operations for Conical Cornea.

Mr. Brundenell Carter. Improved Demonstrating Ophthalmoscope and Perimeter.

Dr. Dudgeon. On Mechanism of Visual Adjustment.

Mr. Jabez Hogg. On Atrophy.

Mr. Hunt (Manchester). On Cerebral Amaurosis.

Dr. Joy Jeffries (Boston). On Passavant's Operation.

Mr. Power. On Transplantation of the Cornea.

Dr. Argyll Robertson (Edinburgh). Case of Unilateral Irideremia. Case of Division of the Superior Rectus.

Mr. Vernon. Observations on Three Cases of Tumor of the Eyeball.

Mr. Pridgen Teale (Leeds). Treatment of Symblepharon by Transplantation.

Mr. Spencer Watson. 1. On a Convenient Method of Applying Cold to the Eye. 2. On Intra-orbital Dermoid Cysts.

Dr. Wolfe (Glasgow). On Traumatic Cataract.

Mr. Cooper. The Ophthalmoscope as an Optometer in Astigmatism.

Our Female "Brethren."—At Edinburgh, a few weeks ago, the Court of Sessions gave judgment in favor of Miss Jex Blake and other female students who have so long and so pertinaciously knocked at the doors of the Scotch University. Their action was against the Senatus Academicus, and the Court was asked to affirm their right to complete their full curriculum as medical students, and to be permitted to graduate on the same conditions as the male students. The Court having decided in their favor, the female students can now require as a right what they so long sought in vain as a favor. The *Pall Mall Gazette* says: "The decision is rather awkward for the University, or at all events for those of its medical professors who have all along proclaimed that, rather than teach women, they will resign their professorships. But the Senatus has itself to thank for the position in which it finds itself, and we do not fancy it will have much public sympathy. It was quite open to the University authorities to decline to allow the matriculation of female students." Mrs. Chaplin Ayrton has just passed her second professional medical examination (Anatomy and Physiology) in Paris, with the note of "*très satisfait*," her certificates from Apothecaries' Hall and the Edinburgh University having been accepted as equivalent to the Bachelier-en-Lettres and Bachelier-en-Sciences, and to the first professional examination. Miss Archer, an English lady, who presented herself before the Medical Faculty for their first professional examination (Chemistry, Physics, Natural History, and Botany), also passed with *très satisfait*.

Miss Dr. Louisa Atkins, a recent graduate of the University of Zurich, has lately obtained the post of Resident Medical Officer in the Birmingham and Midland Hospital for Women, in a competitive examination open alike to qualified persons of both sexes.

Massachusetts General Hospital.—The Treasurer of the Massachusetts General Hospital has lately received the sum of $446,000, which was paid to him as a result of a provision of the will of John Redman, who died twenty years since. Mr. Redman's will made the Hospital residuary legatee of his estate upon the death of his son, who had a life-interest in it. The advance in real and personal estate since that time has increased the value of the legacy from $50,000, which the trustees once expected to receive, to the amount above mentioned.

New Publications.

Books Received.

The Principles and Practice of Surgery. By Frank Hastings Hamilton, A.M., M.D., LL.D., Prof. of Pract. of Surgery, etc., Bellevue Hospital Medical College, &c., &c. W. Wood & Co. 1872.

Original Communications.

SOME OF THE CAUSES OF DEATH OCCURRING SOON AFTER CHILDBIRTH, WITH ILLUSTRATIVE CASES.

By JAMES S. BAILEY, M.D.

A Paper presented to the Medical Society of the State of New York, 1872.

Sudden death during or soon after childbirth is certainly most appalling, and one of the most shocking incidents in the routine of professional life. To see a female apparently in vigorous health until the period of accouchement, and then suddenly expire from some unforeseen accident, and, that too from a cause beyond the control of the attending physician, is well calculated to fill the mind with gloomy forebodings and alarm.

By reference to notes, I find my experience in obstetrics has been somewhat varied, and not altogether free from mishaps and accidents.

Perhaps my practice has been unusually freighted with unfortunate cases, but I shall endeavor to faithfully record them with candor and truth. Even if they do not reflect credit upon my skill as an accoucheur, they may serve to caution those who are self-confident, and boast of superior skill in the treatment of this class of patients. When physicians are heard boasting, claiming show records of thousands of cases free from a single unfortunate case, and that during a long period of practice in midwifery, I cannot but suspect the honesty of their assertion, or think that they have been more than usually favored.

It is impossible for me even now, while attending a case of confinement, to banish the feeling of uncertainty and dread as to the favorable result of cases which, seemingly, are terminating favorably.

In referring to some of the causes of death following parturition, I intend only to mention those coming under my personal observation which have resulted in death, or cases where the patient was severely threatened, and, without extraordinary caution, would have resulted fatally.

Case I. well illustrates the class of cases referred to as dying immediately after childbirth, and without apparent cause:—

Mrs. I., æt. 43, of spare habit, pregnant with her eighth child. Taken with labor pains July 21st, which continued with considerable severity through the day and night. On the 22d she was better, and did not think it necessary to call a physician. She remained quite comfortable until July 28th, when I was sent for, but, not feeling well, requested them to call my friend, Dr. E. H. Davis, to take charge of the case, which he did at 10 P.M. He found her with slight and irregular pains, which were quite sufficient to prevent her from sleeping. She had some cough without expectoration, accompanied with paroxysms of difficult breathing, aggravated by turning on the left side. She complained of headache, was thirsty, and her tongue was slightly coated. Her bowels were in a relaxed condition, having moved several times during the day. Her pulse was quick, hard, and full, but the temperature of the surface, especially the extremities, was lower than usual.

Upon digital examination it was difficult to reach the os, as it was high up and resting against the sacrum. It was barely sufficiently dilated to admit the index finger. Dr. Davis remained awhile, and, as she did not advance, he prescribed an anodyne and left, with instructions to call him whenever it became necessary.

The next day the doctor called at 9 A.M. She was without labor pains, but complained of the headache and the difficulty in breathing, with occasional nausea and spitting of frothy mucus. A foot-bath was prescribed, also a laxative, which greatly relieved her, and she remained comfortable during the day. Upon the 30th she still complained of a stricture in breathing, a circumstance which did not alarm her, as she had thus been troubled for the last two or three years, and very much during the last months of pregnancy.

At 5 P.M. the doctor was again sent for. The symptoms of dyspnœa had much increased as the pains became more frequent.

The child, a large boy, was born about five minutes before his arrival. The cord had not been severed, and the placenta remained in position. There was no flooding; she lay upon her left side, reclining upon her elbow, her hand supporting her head. As Dr. Davis entered she gave him a look of recognition, and faintly entreated help. Her countenance was livid, and she gasped for breath, with the appearance of impending suffocation. Frothy mucus soon began to flow from the mouth and nostrils in large quantities; her pulse was about 90, weak and jerking. She was immediately placed in a sitting posture, but she was unconscious, and expired in about five minutes from the time Dr. Davis entered the room.

Necropsy.—Sectio cadaveris twenty-four hours after death. Rigor mortis well marked.

External appearances.—Body well developed, no œdema, emaciation, or discoloration.

Abdomen.—Intestines and appendages normal; no peritoneal adhesion or effusion; kidneys both normal; liver healthy; spleen also healthy.

Uterus.—Contracted to eight inches in length, the fundus reaching to about the region of the umbilicus. Veins of both broad ligaments fully distended. Internally: placenta detached, and, with the membranes, lying in the vagina; seat of placenta, on anterior wall near the fundus, covered with small, pendent clots. No evidences of hemorrhage. Bladder empty.

Thorax.—Hypostatic congestion of both lungs. A considerable muco-purulent effusion from the bronchi on section.

Heart.—Size normal; one ounce of serum in the pericardum; pericardial surface smooth; aortic valves thickened; clots in left ventricle.

Encephalon.—Entirely normal.

I am indebted to Dr. F. C. Curtis for assistance in making the post-mortem; also for his kindness in making notes of the appearances. We were utterly unable to account for death unless from embolus in some of the pulmonary vessels, which we entirely failed to find.

RUPTURE OF THE WOMB.

Case II.—In the early part of my professional life, and while practising in the rural districts of Alabama, I was summoned in great haste to assist in a delivery which had puzzled many older and wiser heads than mine.

Around the patient sat physicians with heads silvered with years of experience, while I, a sophomore in medicine, was summoned to make known the sad intelligence that rupture of the womb had taken place, and through it the fœtus and placenta had escaped into the abdominal cavity.

The history of the case is as follows:—Mrs. D., a woman physically stout, aged 30, in her fifth labor, which were usually protracted and severe, sent for her

family physician, who, upon examination, discovered the left arm protruding through the vagina. The contractions were occurring with scarcely any intermission. Repeated efforts were made to turn and deliver, but, owing to the frequency and strength of the pains, he failed, and other physicians were summoned, but their efforts were alike unsuccessful.

The patient had, in the midst of a terrific pain, complained of a tearing sensation in the left side, when the pain suddenly ceased, and an examination revealed that the neck had ruptured and that the child had receded into the cavity of the abdomen.

She survived the accident thirteen hours and expired in much agony, though perfectly conscious to the last.

POST-PARTUM HEMORRHAGE.

Case III. was a house-servant belonging to a neighboring physician in Texas, who sent for me at night in the absence of her master, and complained of colicky pains in the abdomen. A few moments in her presence convinced me that she was about to become a mother, which fact she denied, and insisted that she knew, for she had borne ten children previously. It did not require long to convince her of her error, for, in about an hour, a large-sized male was born.

Her husband, who happened to be alone with her, started afoot to the nearest neighbor, distant about two miles, to obtain assistance to dress the child. During his absence I remained with her in the cabin. She conversed cheerfully, and spoke of her mistake, and praised me for helping her through so speedily. She was a negress of unusual intelligence.

When we heard the voices of her husband and the help approaching, she designated my sleeping apartment in her master's house, and requested me to retire. In two hours I was awakened and told she was apparently dying, and, true enough, I found her dying from hemorrhage. She had flooded frightfully, and had saturated her mattress, and the blood had pooled upon the floor. I immediately passed my hand into the womb in order to stimulate contractions, which had the desired effect. The hemorrhage ceased, but she sank from exhaustion almost immediately.

The hemorrhage occurred full two hours after the delivery of the after-birth, and the womb contracted thoroughly before I left her bedside.

DEATH FROM APOPLEXY.

Case IV.—Shortly after returning to this city I was called to attend a healthy Irishwoman in her ninth confinement. She had been out cleaning house upon that day. After a severe labor of five hours she was delivered of a large male child. I remained probably half an hour after accouchement, waiting to see the umbilicus properly dressed. During this time she seemed cheerful and comfortable. After an hour she fell asleep and rested four hours, when she was observed to breathe stertorously. An unsuccessful effort was made to awaken her, when I was sent for. Upon arrival I found her in a deep coma, with a turgid and livid countenance. She expired in half an hour more.

No post-mortem was allowed.

There is no doubt that during the severe uterine contractions a blood-vessel was ruptured within the cranium, which caused an extravasation of blood, which resulted in death.

Case V. was a case of threatened miscarriage. The hemorrhage was considerable, without labor pains. There was excessive nausea and pain in the gastric region.

The patient was aged 30, and had had two living children and two miscarriages prior. She seemed in robust health. The day before the attack she had done a small washing without seeming discomfort. Upon the second day of the flooding the pain in the stomach increased, as did also the uterine contractions. In the afternoon she was delivered of a small fœtus, which she claimed was a seven months' child. In a quarter of an hour after delivery she complained of dimness of vision, and attempted to raise her head, when she sank back upon the pillow and was insensible. This was her condition when I arrived. Her pulse was small and flickering, skin mottled, pupils contracted, breathing slow but not stertorous.

Her condition gradually improved until she was partially conscious. Upon the evening of the second day paralysis was developed upon the right side. Her bowels responded to the action of laxatives; her urine was involuntarily discharged.

Upon the fourth day she grew worse and on the evening of the fifth day she expired.

Autopsy twenty-one hours after death: Body well nourished; rigor mortis present, and a sanguineous fluid oozed from the mouth.

Head.—Skull-cap normal. The dura mater being removed, the vessels of the arachnoid were much injected and engorged with blood. A small quantity of serum was contained in the sub-arachnoidean cavity. Upon removing the cerebrum with the cerebellum and medulla oblongata, a considerable quantity of blood was found effused over the anterior surface of the medulla oblongata, and the fourth ventricle was filled with a clot of blood, which extended into the third ventricle, and was continuous with a very large clot which occupied both lateral ventricles, more especially that on the left side.

The superior portion of the left corpus striatum was softened and lacerated by the effusion of blood. The remainder of the brain-tissue appeared normal.

Thorax.—The right lung was adherent to the ribs by an old and extensive adhesion. The posterior and inferior portions of both lungs were engorged with blood, indurated, and easily torn. Portions cut from these parts did not float in water. Heart, pericardium, and valves presented nothing abnormal.

Abdomen.—No peritoneal effusion. The visceral and uterine peritonæum was red, and the vessels injected. The uterus measured seven inches in length, four and one-half inches in breadth, and two inches in thickness, and contained a dark, friable clot of blood.

The left kidney was pale and mottled upon its surface upon the capsule, and free and extravasated blood was found on its surface at points corresponding to the mottled appearance. The right kidney was of normal size and did not present the mottled look. Both kidneys were in a state of fatty degeneration. The liver was normal in size, and of a dark olive color, and soft.

THROMBUS VULVÆ.

Case VI.—On the 7th of October I was called in haste to see Mrs. R., a healthy German woman, in consultation with Dr. Joseph Lewi. We learned that she was in the ninth month of pregnancy, and that two hours before she undertook to dust the top of a bureau, to accomplish which she stood with one foot upon a chair and the other on an emigrant chest. While dusting she lost her balance, and in the effort to regain herself the chair turned, and she fell astride of its back. She was immediately placed in bed. Her condition indicated violent distress. At intervals of a few minutes she appeared to have violent labor pains, between which she complained of smarting, cutting pains in the region of the vagina. Upon exposing her we beheld a sight which we had, either of us, never before observed.

In the region of the vagina, between the legs, there was a tumor the size of a new-born child's head, perfectly round in appearance, and of a dark, livid color. In trying to ascertain the extent of the injury, we found that it was impossible to introduce the finger by the front under the os pubes, as well as on the side of the vagina. So Dr. Lewi, by great exertion, reached the os uteri posteriorly, causing much pain to the patient, and was astonished to find the os not dilated in the least. Her pulse was 70 and normal. It was thought best not to resort to active treatment, as recommended by authors. Warm water was applied to the tumor, and anodynes prescribed to procure rest. The expectant course seemed to have the desired effect. The patient was more comfortable the next day. The hæmatocele remained the same in size and consistency, but the color was less dark on the left side and centre, but of a very dark color along the edge, extending from two to three inches towards the centre. A small quantity of dark fluid oozed from the internal half of the tumor. Pain resembling labor occurred at intervals, with more or less violence, and had to be controlled by opiates. The urine was passed during the night, and no alarming symptoms being manifest, the same treatment was continued.

On the third day after the accident Dr. Lewi was summoned many times, as the woman each time was supposed to be near delivery. A careful examination proved that labor had not begun. The pain was produced by congestion of the parts. The dark color of the edge of the left labia was reduced to the width of an inch. The consistency of the tumor was just as compact as before, but, on the outside, a little more elastic. The general symptoms were more favorable, the pulse more regular, the bowels were evacuated by means of an enema, and the urine was passed voluntarily.

On the morning of the 10th, sixty hours after the accident, the tumor broke on the inside of the vagina, letting out a large quantity of fluid and coagulated blood, diminishing the outside tumor to half its former size, and leaving, at the place of rupture, a cavity the size of a hen's egg. The patient declared that she was now, for the first time, without pain. A very offensive odor filled the room. A mild solution of carbolic acid was used as a wash, continuing the warm applications as before, and a nourishing diet was recommended. The hemorrhage continued up to the 11th. The size of the tumor was now one-fourth of its original size. The discoloration was reduced to a narrow strip. The pulse was now almost regular, and the general condition of the patient much improved, and she began to desire food. Anodynes were no longer necessary. On the 13th, preliminary symptoms of labor commenced. The os uteri could be reached without difficulty and without pain to the patient. On the 17th, at noon, Dr. Lewi was called, and, while prepared for an emergency, he discovered that the tumor was no impediment to a successful delivery.

After two hours a delivery was effected. The application of astringent washes was now discontinued. There was no hemorrhage. No gangrene and no sloughing followed. The tumor has disappeared, and the patient now enjoys excellent health.

Thrombus may occur during any period of gestation. It may occur during labor or after it has terminated.

Prof. T. G. Thomas only reports two cases as occurring during labor in his extensive experience.

Thrombus occurring subsequent to labor is considered far less dangerous, and the fatality from it, as recorded, is much less.

Deneux published 62 cases in 1830 as occurring before, during, and after labor, and nearly one-third of them resulted fatally, and about the same proportion of the children perished.

Cazeau has a clear and well-written article upon this subject. Dr. Fordyce Barker has also published, in the *American Obstetrical Journal*, Vol. III., page 500, an excellent lecture upon this subject.

PLACENTA PRÆVIA.

No variety of abnormal labor requires more judgment and careful consideration at the hands of the obstetrician than hemorrhage from this cause.

When the placenta is attached so near the os internum, the very process of giving birth causes its detachment, which not only jeopardizes the life of the mother, but the child. This complication of labor, fortunately, is not often found. Although it is estimated to occur in one in 500 cases, many obstetricians practise a lifetime without encountering a single case.

It is the cause of exsanguinated exhaustion occurring during the ninth month, when the os internum dilates and contracts with painless contractions, and when labor commences in good earnest, the profuse flooding is calculated to startle the experienced physician, as the dangerous symptoms are developed during the first stage of labor, often causing death before the os externum is dilated to any considerable size. Surgical interference often fails to save life if full dilatation of the os is not attained, but when this is the case, artificial delivery will often prove the only means of saving mother and infant.

CASE VII.—The following case has recently occurred in my practice: Mrs. S., in her twelfth labor, awakened her husband by contractions of the uterus. While dressing to go for a physician, another pain occurred with a great amount of flooding; she immediately fainted, and her husband hastened to my office, a quarter of a mile distant. With a knowledge of the emergency, it did not take me long to arrive at her bedside. Since the two first pains she had remained passive, without any more uterine contractions. An examination revealed the partially detached placenta, and the os was almost fully dilated, with the breech of a large fœtus presenting. I sat by her side with my hand intact, waiting for another contraction, almost trembling for the safety of my patient. In a quarter of an hour a violent pain occurred, which forced the child through the pelvis, followed by the placenta, which gave me inexpressible relief, as I found the mother quite safe and the child struggling to establish respiration.

A CASE OF MYDRIASIS;

OR, PERMANENT DILATATION OF THE PUPIL.

By M. N. MILLER, M.D.,

NEW YORK CITY.

WALTER S. J. came to my office with the following history: On returning home from his work—that of engraving—three weeks before, and having occasion to observe the hour from a clock in a neighboring church-tower, his eyesight, previously good, completely failed him. On looking steadily at the face of the clock for a moment, it appeared blurred and objects seemed multiplied. This condition lasted for a few minutes only, and after reasoning that he had, perhaps, overworked his eyes, gave it no more thought.

Two or three days after this he experienced another attack, similar to the first, lasting somewhat longer but soon passing away, leaving vision unimpaired. From that time similar disturbances occurred, increasing in

frequency and duration, until, at the time of his presenting himself to me for treatment, he was totally unable to use his eyes. Objects appeared indistinct and multiplied and always surrounded by a fringe of color similar to the chromatic aberration he had observed around objects when viewed with the magnifying lens used in his profession. Latterly his perception of distances became imperfect.

On examination I found the pupil of both eyes greatly enlarged, a condition which he, singularly, had not himself noticed. Ophthalmoscopic examination detected no abnormal condition with the exception of slight congestion of the vessels of the retina, though to no greater extent than might have been attributed, reasonably enough, to the stimulus of the abnormal amount of light admitted through the enlarged pupil. The retina was in normal condition as regards its sensitiveness to impressions. The muscles of the orbit were perfect in function, with no indication of strabismus or falling of the eyelids.

The disturbance of vision seemed entirely in consequence of the permanent dilatation of the pupil, as all the symptoms of visual disturbance could be reasonably referred to this condition. Mydriasis may be caused by paralysis of the third nerve—which supplies the circular muscular fibres of the iris with contractile power—thus enabling the radiating fibres to overpower the circular ones; but this condition, if not amaurotic, must necessarily be accompanied with loss of muscular power in the internal rectus and levator palpebræ. That the third nerve was not implicated was shown by the absence of ptosis and strabismus in the patient.

On furnishing him with a blackened cardboard with an aperture the normal size of the pupil and directing him to look through this, it was found that objects partially assumed their natural appearance.

In consequence of the nature of his employment the patient obtained but little active exercise in the open air, and to this cause he no doubt correctly attributed an obstinate constipation of the bowels which, he informed me, had existed for a number of years. For this condition he had taken the various quack pills and compounds without obtaining any permanent benefit. Indeed, at the time of his visit to me he was using the last wonderful discovery (!) of this character in the form of aloetic "bitters."

From the above history I came to the conclusion that the dilatation of the pupil was caused by the gastric irritation—this irritation having been communicated through the medium of the sympathetic to the nervous branches of the radiating fibres of the iris. Why a certain amount of gastric irritation should, in this person, produce mydriasis and what appears to us to be a similar irritation or cause in another individual produce no such result, we are unable to determine.

In the belief that the above pathological view was correct I gave the following prescription:—

℞.

Podophyllin	gr. v.
Rhei Pulv	℈ii.
Ext. Hyoscyami,	
Ext. Nucis Vom	āā gr. v.
Capsici Pulv	℈ss.

M. f. pil. No. XX.

He was directed to take three of these pills at night, on retiring, and subsequently one every morning.

I met the patient in about two weeks after the above consultation, when he told me he had used the medicine perseveringly, and at the end of the third day no disturbance of vision was manifest. The first dose produced very active catharsis and his eyes seemed worse, but after active purgation had ceased vision became more perfect, and he had continued the use of the pills up to the time of our second meeting. He contended that his bowels were assuming a natural condition and signified his intention of having the prescription repeated.

Since treating the above my attention has been called to a somewhat similar one, in the case of a child, a patient of Dr. C. T. Jewett's, in which the dilatation of the pupil resulted from parasites in the intestinal canal. The dilatation yielded readily, as the doctor informs me, to treatment directed toward the removal of the parasites or exciting cause.

With the view that the above may possess some points of interest to the profession, I have hastily noted some of the more prominent facts.

356 W. 18th St.

DUST AS AN EXCITING CAUSE OF DISEASE OF THE AIR-PASSAGES.

By WM. H. BENNETT, M.D.,

NEW YORK.

It is well known that the mortality from pulmonary disease among those whose occupations force them to inhale, for many hours daily, an atmosphere loaded with particles of dust—as stone-cutters, knife-grinders, rope-makers, etc.—is exceedingly great. And it cannot have escaped the notice of the profession at large that dust from a different source, but in considerable quantity, viz., the dust of our streets, is being breathed constantly day and night by all residents of large cities. But the possibility of there being any connection between the inhalation of an atmosphere so highly charged with particles of matter, and diseases of the air-passages and lungs, does not seem to have attracted particular attention.

Believing the injury done the air-passages by this irritant to be worthy of a more careful study than it has yet received, I have presumed to call the attention of the profession to the subject in this article; confining my remarks entirely to that form of dust which may be seen and felt. Professor Tyndall has, I think, satisfactorily demonstrated the presence of suspended matter in every atmosphere; but particles so light as to readily float in the air, and so minute as to require the electric or other powerful light for their detection, are not, *per se*, of much interest to the physician, for they can cause no irritation whatever, and need not be taken into consideration when the coarser particles abound in such quantities, as surely find access into the air-passages, and may as readily convey septic matter.

My attention was first called to this subject by the following observations: I noticed that many persons with chronic nasal catarrh instinctively shunned dusty localities. And in making rhinoscopic and laryngoscopic examinations, I several times discovered the superior pharyngeal space and interior of the larynx covered in places with a coating of dust and mucus, which, on being removed, exposed to view an irritated and not unfrequently an ulcerated condition of the membrane beneath. I found many individuals with slight catarrhs suffered no inconvenience whatever while residing out of the city, but on coming to town they were always made very miserable, except in wet weather or when the streets were well sprinkled, by the sensation of burning and dryness which the dust produced.

It is easily understood that the finer and lighter the particles of matter, the more readily and more deeply they will penetrate the air-passages. In my opinion it is the finer dust which does the most harm; for although upon being deposited it causes less irritation than the coarser variety, yet it remains longer upon the membranes, mixed with the secretion, and hastens decomposition; while particles of any magnitude do not ordinarily get farther than a short distance into the nasal cavities, and they excite sufficient irritation to be almost immediately thrown off. Under favorable circumstances the finer matter may remain in the air-passages some time; *i. e.*, when the secretion is scanty and viscid, or when the epithelium is wanting. I have collected from the larynx of a living subject, immediately after a thirty-six hours' rain, a black deposit which proved to be composed of minute particles of dust. This may possibly have been inhaled in-doors, but I do not think such an explanation probable.

The time required for the production and fatal termination of that form of pulmonary disease known as stone-cutters' consumption, knife-grinders' rot, bronchial phthisis, etc., depends, *cæteris paribus*, altogether upon the composition and nature of the matter inhaled. Thus, knife-grinders who grind on dry stones are affected and die sooner than stone-cutters, and these latter succumb sooner than those that work in cotton factories and rope-walks. Now this is exactly what we would expect; for the patient in the first instance is exposed to a very fine dust, which penetrates deeply into the air-passages, and the particles are exceedingly sharp and angular, irritating to the utmost degree. While in the two latter cases the atmosphere breathed, although more heavily laden with particles of matter, they are softer, coarser, and do not so readily scratch and penetrate the tissues with which they come in contact. However, the atmosphere of all large cities, and of the city of New York in particular, contains dust of every description and of the foulest and filthiest kind. We get the fine sharp particles which are ground from the pavement, as well as the earthy and organic matter; and the scavengers do their part to make the situation worse by leaving in the gutters a good share of the ashes and garbage which should go to the dumping-grounds. Decomposing animal and vegetable substances, together with the excrements of the numerous animals which crowd our streets, furnish a share of what is taken in with every breath of air. There is plenty of food upon which germs may subsist, and a rich soil for them to multiply in.

The most of the dust inhaled is deposited on the Schneiderian membrane, in persons who breathe as they should, through the nose; but much of it reaches the pharynx, and some of it gets into the larynx; of this we have positive proof. And although we cannot demonstrate in the living subject that any of the suspended matter reaches the bronchi, we have every reason to suppose it does. We know it does in those cases where the atmosphere breathed is excessively charged, and it must under ordinary circumstances, only in a less quantity. Now, granting this, does it not claim our attention in cases of pulmonary consumption? Not only are the paroxysms of coughing increased in frequency and violence, but, supposing the irritant to penetrate to the affected parts of the lungs—as, for instance, where a vomica communicates with a large bronchial tube—is it not reasonable to suppose sufficient irritation might thus be produced, by the entrance of dust particles, to cause the disease to extend where otherwise cicatrization would have taken place?

But the parts which most suffer from contact with the dust are the lining membranes of the nares and pharynx. They filter the air which passes over them of most of its suspended matter, and consequently are subjected to the greatest amount of irritation. In many cases of catarrh the nasal passages are so narrowed, from swelling of the mucous membrane which lines them, that the patient is obliged to breathe in part or altogether through the mouth; and here the lining membrane of the larynx is equally exposed to the influence of the dust.

I am not prepared to prove that chronic inflammation of the above-mentioned parts will ever result, in a healthy individual, from the inhalation of an atmosphere as ordinarily charged with the dust of our streets, *per se*. The effect upon many may be so insignificant as to deserve no notice. But as the epidermis is thinner in some persons than in others, why not the epithelial covering of the mucous membranes also? And where any predisposition to chronic catarrh already exists, or where other influences are brought to bear, this source of constant irritation must certainly be a great obstacle with which such persons have to contend. I do not for a moment underrate the influence of repeated and protracted acute catarrhs, in the production of the chronic form, but I think these acute attacks would oftener end in complete resolution, chronic cases prove less rebellious to treatment, and catarrhal ulcers be of less frequent occurrence, were it not for the presence of a considerable quantity of suspended matter in the air we breathe. For it not only acts as an irritant, destroying the epithelium and changing the character of the secretion, but it mixes with the secretion, and in my opinion actually induces decomposition, owing to the putrescent organic particles which form a good part of it.

All persons suffering from chronic catarrh of the superior air-passages, are not equally annoyed by the irritant we are considering. In the moist variety of catarrh, where the secretion is abundant and is soon discharged, there is not so much discomfort produced. But in the dry form, and this is the commoner variety, the inhalation of dust is very distressing to all. Many patients will deny at a first interview that they are affected by this element, who, at a second meeting, will volunteer the information, that since their attention has been called to the subject, they are sure the dust plays an important part in making them uncomfortable.

110 E. 30th St., New York.

Progress of Medical Science.

Plastic Apparatus in Surgery.—Samuel B. St. John, M.D., of New York (*Am. Journ. Med. Sciences*, July, 1872), in a valuable paper on "Plastic Apparatus in Surgery, with especial reference to that variety made with plaster-of-Paris," gives the statistics of 142 cases of simple fracture, mostly taken from the records of Bellevue Hospital, which were treated by the gypsum apparatus.

Of these 142 cases there were 51 of the tibia and fibula (exclusive of Pott's), 27 of the tibia, 12 of the fibula, 12 of the humerus, 7 of the radius, 5 of the ulna; 19 Pott's fractures, 1 of the astragalus, 2 of the os calcis, 1 of the scapula, and 5 of the patella. The average time of union of the tibia and fibula was 45 days. 41 cases averaged only 36 days. The average time of union of the tibia was 42 days, and 22 of these averaged 38 days. Of the fibula, the average time was 36 days; of the humerus, 37 days; of the radius, 31 days; of the ulna, 31 days; of Pott's fractures, 39

days; of the ossa calcis, 30 days. The whole 142 cases averaged 40 days in uniting.

In analyzing the 50 cases of fracture of the femur treated with the gypsum apparatus, he finds that the average shortening in all was ½ of an inch. The average shortening before treatment was 1¼ inch. The use of an anæsthetic does not seem to have essentially altered the result, for 38 cases where ether was used gave an average shortening of ¼ inch. The average time of union to time of leaving off the splint was 44 days. Eighteen cases gave no shortening; the average shortening of these 18, on admission, was 1¼ inch. Sixteen cases under 18 years of age gave ¼ inch shortening. Twenty-seven cases over 18 years gave between ¼ and ½ inch, and 21 of these averaged less than ½ inch. In 23 cases the splint was applied within 24 hours; of these, 6 were from direct violence, and 2 were compound. In 14 cases the splint was applied between 24 and 48 hours after the injury; of these, 2 were from direct violence. In 8 cases the splint was applied between 2 and 7 days after, and in 3 cases after 7 days had elapsed.

	Average shortening.	On admission.
21 cases had femur broken in middle	¼ in.	1½ in.
15 cases had femur broken in junction of middle and lower third	⅓ "	1 "
7 cases had femur broken in junction of middle and upper third	1/10 "	1⅛ "
5 cases had femur broken at cervix	½ "	1½ "
1 case had femur broken below trochanter	¼ "	1½ "

In comparing these statistics with those of other modern hospitals, he remarks: Holthouse, in the last edition of Holmes' Surgery, says that at present, in London hospitals, shortening occurs after fracture of the femur in adults in 90 per cent. of the cases, and 50 per cent. in children. In the above cases it is 25 per cent. in adults, and 50 per cent. in children. Holthouse gives 50 cases with an average shortening of ¾ of an inch, and recommends the plastic apparatus for infants, and for adults after the *first six weeks*.

A paper by Dr. Gurdon Buck, of New York, in 1861, gives 20 cases, 17 of which had from no shortening up to 1¼ inch; average ½ inch; only 1 adult without shortening, and 3 children. In a number of cases collected by Dr. George F. Shrady from the Records of the New York Hospital in 1859, out of 74 cases 19 had no shortening; 55 had ¾ inch. Of the 19, 13 were over 12 years old; average shortening of the 11 under 12 years of age was ½ inch. In 27 cases reported in the New York *Journal of Medicine*, in 1858, by Mr. J. Campbell, the average time of union was 45 days.

Statistics of 26 cases of compound fracture treated with gypsum splint give 63 days as the average time of union. Twenty occurred from direct violence. Twenty-three were put up at once, or within twenty-four hours after receipt of injury.

Aphonia.—Meyer, of Berlin, reports the case of a young girl with a crowing cough, the sequel of whooping-cough, which lasted from two to three minutes, and was repeated every quarter or half hour; the paroxysms terminated in aphonia. The disease increased in spite of the most active treatment. After two years electric medication was resorted to. Meyer stimulated the nerve of the larynx by placing one of the electrodes in the direction of the recurrent laryngeal nerve, on the internal edge of the sterno-cleido-mastoid, in the groove between it and the tracheal artery and œsophagus; the inferior electrode was placed on the transverse process of one of the cervical vertebræ, in order to be as near as possible to the origin of the vagus nerve. After sixteen séances, the attacks had already intermissions of from two to three hours, and at the end of twenty other séances they ceased entirely, and with them the aphonia disappeared.—*Am. Journal Obstetrics.*

Removal of an Intra-uterine Fibroid.—C. H. Giberson, M.D., Brooklyn, L. I. (*Am. Journ. Obstetrics*, May, 1872), relates the successful removal by enucleation of an intra-uterine fibroid from a married woman, aged thirty-four years. It was the size of a large hen's egg, irregular in shape, with a tough, fibrous framework enclosing softer tissues, more or less broken down. The microscope showed it to be a true fibroid. The uterus and vagina were thoroughly syringed every six hours with a weak, tepid solution of carbolic acid, and fomentations were applied to the hypogastrium. The washings gave great comfort, and doubtless served to allay local irritation, as well as to lessen the septicæmia.

Hydrochlorate of Ammonia.—Spencer Thomson, M.D., Ashton, Torquay (*British Medical Journal*, July 13, 1872), finds the hydrochlorate of ammonia one of the most efficient of remedies in cases of portal dropsy, prescribed in scruple or half-drachm doses, given tolerably diluted, every six or eight hours. The recent accounts of the success attending the employment of this remedy in hepatic affections in India, he hopes will lead to its more extensive use in England.

Good Effects of Aconite in Acute Pneumonia.—Among other cases of interest which came under the observation of Dr. Murchison, in the male wards of St. Thomas' Hospital, London, was that of a boy aged fifteen, who was admitted with acute pleuro-pneumonia of the right side, and herpes labialis, and considerable increase of temperature. On the administration of eight minim doses of tincture of aconite, with liquor ammoniæ acetatis every four hours, the temperature at once came down, and the disease did not increase.—*British Medical Journal*, July 13, 1872.

Report of Private Obstetrical Practice for Thirty-nine Years.—At a meeting of the Dublin Obstetrical Society, on the 20th of April ult., Dr. Fleetwood Churchill presented a summary of his private practice, based on facts entered in his case-books at the time when they came under observation. In the period from January, 1832, to December, 1870, inclusive, he had attended 2,547 cases of labor, exclusive of abortions and premature births before the seventh month. The labors were most frequent in April, and least so in February. In 2,540 cases there were 1,290 male, and 1,250 female children; and the deaths numbered 130, or one in 19.54. There were 16 cases of twins, with 11 deaths; and one case of triplets. In 47 of the 2,547 cases, labor was protracted beyond twenty-four hours. In 7 cases the second stage exceeded ten hours in duration. No death occurred in instances either of prolonged second stage, or of tedious labor. The third stage was five minutes in 1,965; and an hour in only 8 cases out of 2,387. *Post-partum* hemorrhage occurred three times, and once ended in death. Dr. Churchill had never known hemorrhage to occur when firm grasping was applied to the uterus immediately after the child was born, causing it to contract rapidly and to expel the placenta into the vagina. The length of the funis varied from about fifteen to fifty-seven inches. In 2,565 children the following *presentations* were met with: superior extremities, six times; breech, forty-nine times; foot or knee, eighteen times; face, four times; forehead towards pubis, twenty-one times; prolapse of funis, eight times; hand or arm with head

seven times; foot and hand, once in a putrid child; spontaneous evolution, once. Of *complex* labor there were, one case of convulsions; five cases of accidental hemorrhage (with two deaths among the children and one among the mothers); two of unavoidable hemorrhage (two children lost); one case of *pre-partum* internal hemorrhage (fatal to mother); one case of rupture of uterus (fatal in twenty minutes) came under observation, besides a few cases of laceration of the perinæum, eight cases of prolapsed funis, and three of puerperal mania.

As regards *operations*—version was employed on seven occasions; the forceps cases numbered forty-two, or one in sixty and a half, with three deaths; and craniotomy was performed seven times, the mothers recovering in four cases. The deaths after the last-mentioned operation were caused by convulsions (for which the operation was performed in the hope of saving the mother), by hemorrhage, and by phlegmasia dolens. In the 2,547 cases the maternal deaths amounted to seventeen, of which puerperal fever caused eight.

In the discussion which followed, the doctor stated that for nearly twenty years he had never had occasion to extract the placenta by hand.—*Brit. Med. Journ.*

Supporting the Perinæum in Labor.—In working up the literature of this procedure, H. Plummer, M.D., El Dorado, Kentucky (*Am. Practitioner*, August, 1872), says that this unwarranted practice was first recommended by Puzos in 1747. In his work, published in 1759, he directs pressure to be applied to the perinæum "from behind forward." In 1767 John Harvie advocated support as a novelty in his "Practical Directions, showing a Method of Preserving the Perinæum at birth." Years later Talver showed that this was the practice in Paris; but it was only through the influence of Hamilton in 1775, and of Dease in 1783, that support to the perinæum became an established canon in midwifery. After nine years' experience Hamilton so changed his views that he says, in an additional work, "support to the perinæum is a doubtful and hazardous expedient." He remarks that this practice, which for so long a time passed almost unquestioned, is evidently beginning to lose ground. Churchill, Velpeau, W. Tyler Smith, Swayne, Denman, Smellie, Lee, and well-known writers on obstetrics are mentioned as evidences against it.

Case of Excessive Hypodermic Use of Morphia.—Dr. Judson B. Andrews, Asst. Physician to the New York State Lunatic Asylum, Utica (*Am. Journ. Insanity*, July, 1872), mentions the case of a woman, aged 30 years, who had passed into an acutely maniacal condition, and exhibited scars and ecchymosed spots, covering nearly the whole of the body, which could be reached by her own hand. When convalescent, she asserted that she had employed the hypodermic injections for three and one half years, once, and much of the time twice a day, making in all about two thousand injections; that during the last few months of its continuance, she had used a drachm and one-half of morphia per week; that she inserted the needle perpendicularly to the surface, and often carried its full length into the tissues. About four months before death, the patient, in rubbing her hand over the breast, discovered an elevated point, just under the skin, which on pressure gave a pricking sensation. This was cut down upon and a broken needle extracted. From this time from one to twelve needles were removed daily from various parts of the body; from the left breast, the abdominal parietes, the mons Veneris, the labia and vagina, the thighs, from the leg down to the ankle, from the buttocks, from about the anus, from the back as high up as between the shoulders. Two hundred and eighty-six needles were taken from her body during life; 11 were found in the tissues after death; 3 were passed from the rectum during sickness; making a total of 300 needles and pieces. Of this number, 246 were whole, and 54 were parts of needles. As regards position in the body, they were distributed about as follows: in right breast, 150; left breast, 20; abdomen, 60; genitals, 20; thighs and legs, 30; back, 20.

It was supposed that they were introduced through the skin, while she was under the influence of morphia, hypodermically administered, and while suffering from hysteria. That some were found in positions where they could not have been inserted by the patient, can be accounted for by their movements in the tissues, which were observed so often during the life of the patient. Her mother could throw no light on the subject, but recalled the circumstance that the patient purchased, at one time, ten papers of needles, and could account for only two of them. They were not obtained or introduced while in the Asylum.

Food for Young Infants.—Dr. Charles P. Putnam, M.D., of Boston, in a paper on "Artificial Food for Young Infants" (*Boston Med. and Surgical Journal*, Aug. 1, 1872), read before the last meeting of the Massachusetts Medical Society, thus sums up: The only proper food for a new-born baby is the milk of its mother; her place is best supplied by a wet-nurse; the great obstacle to the use of cows' milk is not the insolubility, but the irritating character of its coagula; this may be avoided to some extent in many ways, among others, by the addition of a little starch and gelatine, for the purpose of effecting a mechanical separation of the particles of coagula; and for any other purpose starch and gelatine are never to be used.

Poisoning by Vanilla.—A physician in Worcester County, Mass. (*Boston Med. and Surgical Journal*, Aug. 1, 1872), in speaking of cases of poisoning by vanilla flavoring, stated that in his own family evident and violent poisoning from a similar cause recently took place. Five members of the family were affected, all of whom had partaken of custard flavored with vanilla, and two who had not eaten escaped. The symptoms were severe diarrhœa, with violent pain in the lower abdomen, without much gastric disturbances.

Cheap Collodion.—A cheap way to obtain collodion is to steep white printing or machine paper in concentrated sulphuric acid from five to eight minutes, wash and dry it: it is now stiff as parchment, and should be cut small and digested in ether.—*Drug. Cir. and Chem. Gazette.*

A New Method of Treating a Fracture of the Jaw.—W. F. Griswold, Dentist at Leavenworth, Kansas (*Missouri Dental Journal*, July, 1872), describes a case of fracture of the right side of the inferior maxillary (with cuts), occurring in the person of Professor J. Wherrell, which was skilfully treated by the aid of a vulcanized rubber plate, and a novel gutta-percha splint, with two clamps of silver wire. Six days after the accident, in company with Dr. Weaver, the jaw was set, which was done by the patient himself. He took the vulcanized rubber plate, placed it in his mouth, arranged the fractured parts; and as each tooth had its own place in the plate, there was no trouble in getting the parts in position. Some of the advantages of this method of setting a fractured jaw are: 1st. The operation of setting is painless; 2d. The patient has freedom of the jaw, and suffers very little inconvenience in eating, drinking, and speaking; 3d. A perfect articulation of the teeth and arrangement of the parts are secured with an unerring certainty.

Three days after the jaw was set, the patient heard one of his classes in chemistry. On the thirty-sixth day from the accident the plate was removed, and all of the parts were found in perfect position.

Nitrite of Amyl in Neuralgia of the Heart.—Leartus Connor, M.D., Prof. Physiology in Detroit Med. College (*Detroit Review of Medicine*, Aug. 1872), extols this remedy in cases of this character, and mentions a case, accompanied by alternating attacks of asthma, in which prompt relief was afforded after the patient had inhaled from six to ten drops. In this history the subjoined points are of interest: Though no hereditary cause for angina could be traced, the life of the patient had been such as to most thoroughly exhaust the nervous system. There was no evidence of any heart-disease or ossification of the arteries. The attack came on after a course of intermittent fever, unchecked for two weeks. As it was accompanied by alternating attacks of asthma, gastralgia, and intercostal neuralgia, this would point to the conclusion that these were all due to the same cause—some disease of the nerves supplying the heart, solar plexus, and the lungs. The advantages of this remedy over any other anti-spasmodic are its more rapid action, and its freedom from any unpleasant sequelæ. In his use of nitrite of amyl he has never been able to obtain any other therapeutical effects than those following the relaxing of spasm.

Extraction of a Piece of Rye Straw from the Conjunctiva.—At the May meeting of the Detroit Academy of Medicine, Dr. Noyes (*Detroit Review of Medicine*, Aug., 1872) presented a piece of rye straw, one-half an inch long, which he had recently removed from the retro-tarsal fold of the conjunctiva of a child eight months old. The parents stated that two months since a little girl, who had been playing with the baby, told them that the infant had stuck a straw in its eye. Soon a soft fungoid tumor appeared in the retro-tarsal conjunctival fold. Breaking part of it down with his finger-nail, Dr. Noyes brought away the piece of straw and then the rest of the tumor. The eyeball was not injured by the growth, and the inconvenience produced was slight.

The Individuality of the Sympathetic Nerve.—From a translation of Professor Schiff's paper on "The Individuality of the Sympathetic Nerve," by S. Lilienthal, M.D., New York (*New England Med. Gazette*, July, 1872), it is proven that the division of the medulla oblongata produces the same manifestations as the division of the cervical part of the sympathetic, and that therefore the medulla oblongata is the original point of these manifestations. He also tries to prove by experiments, that the origin of the vaso-motoric activity ascribed to the sympathetic, may be continued into the cerebro-spinal central system. He positively denies the influence of the sympathetic on the cardiac muscles, and asserts that the persistaltic motions of the bowels are modified by the spinal cord, according to the mode of irritation, when the dorsal portion of it is irritated. This influence ceases after division of the splanchnic nerve. Schiff considers nutrition a chemical process, in which the influence of the nerves is indirect, and limited to the activity of the blood-vessels. Secretion takes place in many glands under the influence of spinal nerves; in other glands secretion is stopped under the influence of the sympathetic. In such a case the nerve-fibres producing a contraction of the blood-vessels emanate from the sympathetic nerve; those acting in dilatation of blood-vessels, from the central nervous apparatus. As both originate in the medulla oblongata, it may be taken for granted that here also the sympathetic acts only as a conductor of the function exercised by the medulla oblongata. After showing that trophical processes are also under the influence of the animal nervous system, he produces cases where the vegetative nerve, the sympathetic, exercises the functions of the animal nervous system.

Local Treatment of Leucorrhœa.—D. M. Clay, M.D. (*American Practitioner*, Aug., 1872), advocates in this disease the process of irrigating the vagina and cervix, twice a day at least, with the "fountain" (recommended by Scanzoni), or "Davidson's" syringe. In no case where it is not positively contraindicated would he suggest less than one gallon of warm water. He infinitely prefers the warm to the cold, in consequence of there being no shock or reaction afterward, two very important considerations in the treatment of uterine disease. After each irrigation is finished, the parts are in a condition to receive medication, either in the form of ointment, solution, or solid. He generally prefers the solution, holding some of the preparations of iron, for instance, ferri iodidi, ʒj.; aqua pura, ℥viij.; or ferri sulph. in same proportions. Argent nitrat., cupri sulph., potass. iodidi, potass. chloratis, and the vegetable astringents, are all excellent remedies for this purpose. After the cervix has been thoroughly exposed there will frequently be observed a thick, glairy, tenacious mucus plugging the os, which will require for its removal some effort on the part of the operator. This is best accomplished by using small pieces of cotton, attached either to a sponge-holder or a long delicate pair of forceps. The parts being in a condition for the application of remedies, he usually then uses chromic acid dissolved in water, one part of the former to two of the latter. While on the probe or sound, the cotton is saturated with the chromic acid solution, and introduced gently into the cervical canal, fully one and a quarter inches, and allowed to remain only a few seconds. This application should not be repeated oftener than every six or eight days, and not then unless positively indicated. When the discharge proceeds from the cavity of the uterus, either from the body or fundus, he has found the acid nitrate of mercury invaluable for its relief, but great care should be taken to see that the os and cervix are well dilated before recourse is had to this remedy. His plan is to saturate a small pledget of lint or cotton with the acid nitrate of mercury, and fasten a delicate string around it, so that it can easily be withdrawn, and gently introduce it to the fundus, allowing it to remain for six or eight hours, and then remove it. Repeat this once or twice weekly for two or three weeks, and the result will be most satisfactory.

Carbol.—In an extended paper "On Carbolic Acid: its Composition, Properties, Uses in Surgery, and as an Internal Remedy," by J. H. Bill, M.D., Surgeon U. S. A. (*Am. Journ. Med. Sciences*, July, 1872), the word carbol is preferred instead of carbolic acid. In the first place, because it is non-committal, involving no hypothesis. Then it comes very near to the word originally proposed by Runge, the discoverer, in 1834. If the word phenol is used (which has been proposed in lieu of carbolic acid) to designate the class, some other word is needed to specify the individual. Carbol is a word constructed like the other phenols, as cressol, phlorol, etc.; it is euphonic, easily written, not liable, especially in prescribing, to be mistaken for anything else, readily convertible into a verb or adjective, and not yet appropriated.

When carbol is administered to a man in doses of six to eight grains, dissolved in a wineglassful of water, the following phenomena present themselves:—1st. A

loss of sensibility in the mouth and throat, or a feeling of numbness, as when aconite is applied to the lips; this is fol'owed by a cooling sensation, like that produced by mint.—2d. Slight nausea, especially if the stomach is empty. This is succeeded by an uneasy feeling in the abdomen, like that felt before an attack of gravel.—3d. Slight vertigo, ringing in the ears, and partial deafness, judged by the ticking distance of a watch. This vertigo is so great, if the carbol is taken just after r'sing (and of course on an empty stomach), as to compel the resumption of the horizontal position. 4th. Loss of heart-beat; the pulse, according to his repeated observation, and on different individuals, losing from four to eight beats in a minute, failing also in fulness. The temperature under the tongue undergoes no noteworthy alteration.—5th. Diarrhœa. This is not invariable, and does not appear until several doses have been taken. If present it usually disappears on the third or fourth day of the continued administration of the medicine.—6th. After long-continued use of the medi'ine, feebleness of heart-beat, muscular debility, and loss of flesh occur.

On omitting the medicine after it has been taken for several days, flatulence usually occurs, accompanied with a feeling of depression, like that felt after the st'mulating effects of morphia have ceased. From the facts laid down, the author thinks that the conclusions are justified—1st. It is not proven that carbol is a general disinfectant. 2d. It is of the greatest use to disinfect wounds. 3d. It accomplishes this by destroying pus, etc., by preventing inflammation. 4th. Its use in wounds moderates pain. 5th. Its use on the skin relieves itching, and produces an anæsthesia sufficient for minor cutting operations. 6th. It seems to be of use internally in certain cases, in scaly skin diseases, and at least as moderator of pain in cancer. 7th. It has not proved of decided use in other diseases.

Pelvic Peritonitis and Peri-uterine Cellulitis.—Dr. James L. Brown, of New York (*Am. Journ. Med. Sciences*, July, 1872), says that while these affections are far more common than has generally been supposed, they are by no means so frequent as Courty estimates, who stated that they constituted about one-third of all uterine ailments. Of more than four thousand recorded cases of uterine disease, he is sure that the relative proportion of cases of this kind that can be diagnosticated does not exceed one in ten.

The causes of these affections are chiefly these: Parturition or abortion, endometritis or ovaritis, operations, or injuries, escape of fluid into the peritonæum, exposure to cold, gonorrhœa.

The principal diseases from which they are to be differentiated are: Hæmatocele, fibrous tumors, uterine deviations, displacement and fixation of the ovary, fæcal infarction.

His records show that out of forty-nine cases of cellulitis, eleven followed labor or abortion, five were consequent upon operations, and in the remaining thirty-three the cause was either not known or not ascertained. Of sixteen cases of peritonitis five were due to labor or abortion, four to operations, and the other seven to causes not known or not stated. Ten of the cases of cellulitis and six of peritonitis occurred in nulliparous women. In regard to prognosis, so far as danger to life is concerned, there is, in most cases, nothing to be apprehended. Functional derangements of the ovaries, uterus, bladder, and rectum persist for a variable period, which is generally much less in cellulitis than in peritonitis. All evidences of cellulitis may pass away in a few weeks, but the signs of peritonitis, unless removed by pregnancy, generally remain for years.

Pharyngitis and Rhinoscopy.—Harrison Allen, M.D., Surgeon to Philadelphia Hospital (*Philadelphia Medical Times*, August 1, 1872), says that in pharyngitis dependent upon general naso-pharyngitis, no instrument can approach in efficacy the atomizer. The best form of this instrument with which he is familiar is that known as the Sass' sprayer. The peculiarity of this instrument consists in the test-tube receiver, which is held in the left hand, and a pair of very long barrels, the points of which, when the receiver is near the mouth, are lodged within the axis of the pharynx; the whole being worked by a bulb and tubing held in the right hand. In specific ulceration of the naso-pharyngeal space, he has obtained good results from the use of a solution of sulphurous acid of one drachm to the ounce, sprayed upward through the naso-pharyngeal aperture; or the pure acid may be applied to the affected spot if the part thus operated upon lie below the palate. Where there is abundant mucus, as in lingering acute catarrh, a spray of strong alum water proves oftentimes efficacious. It is in this class of cases that insufflations of alum are of advantage. The best insufflator is a simple glass tube, bent at convenient angles and furnished with a fenestra at about its middle; a light piece of India-rubber tubing attached to one end of the glass tube completes the instrument. The powder to be used is inserted in the glass tube through the fenestra, which is then covered by a sliding cylinder of rubber. The instrument now being inserted in the pharynx, with the orifice of the tube pointing upward, the opposite end of the instrument is held between the lips of the operator, who quickly blows the powder up into the naso-pharyngeal space.

In closing this "Clinical Lecture," he advocates the nasal douche as an adjunct to the treatment; more, however, as an aid in *washing* the parts than to medicate the region. Weak solutions of salt, or carbonate of soda, used *tepid*, will meet every indication. The washing need not be repeated oftener than once a day, —say at the time of the morning toilet.

Oxytoxic Action of Cinchona.—James Bordley, M.D., of Centreville, Md. (*Am. Journ. Med. Sciences*, July, 1872), practising in a region greatly infested by malaria, affirms that the true physiological action of cinchona, so far from producing any uterine contractions, tends directly to control such an action, and to suspend contractions which threaten abortion. Those threatenings which are the result of malarial disturbance are alluded to more particularly. If it be true, as is asserted by some, that cinchona diminishes the proportion of fibrin in the blood and lessens its coagulability, it seems to him a most dangerous remedy to employ for the purpose, even were we to admit that it possessed such emmenagogue power when given in rational quantities.

Pressure upon the Perinæum in Labor.—H. Plummer, M.D., El Dorado, Ky., in a paper read before the Medical Society of Mercer County, Ky. (*Am. Practitioner*, Aug., 1872), confesses that he is not able to see how pressure upon the perinæum in any way averts the danger of its laceration, but can understand how it may favor such an accident. The parts are already on the stretch from the descending head of the fœtus when the strain is increased upon them by pressure from without. In this way it seems to him probable many lacerations are brought about. They are said to be unknown among savage mothers. They are not often encountered in girls who, desiring to conceal their shame, give birth to their children alone and unaided. They seldom occur among the laboring classes, who for the most require and receive but little obstetrical assistance. It

may be doubted whether any amount of pressure that can be safely applied against the head of the child will retard its descent; nor is he convinced that any external pressure facilitates the process of labor, except that it may turn away the head from the perinæum when impinging with dangerous force against it, and give the child the proper direction. It is often very disagreeable to the woman, and when so, ought certainly not to be urged upon her. The whole process of parturition is one usually so natural, that in a vast majority of cases it may well be left to the efforts of nature.

If any assistance were necessary he would prefer to rub forward the corrugated scalp in the absence of pain, and to introduce the fingers into the rectum, assist in raising the head, and make it, as far as possible, hug closely the pubic bones. When the pain subsides, the head may be pushed back. By this means the pains are lengthened and the time prolonged, so that the parts may become fully dilated.

Cholera Infantum.—John O'Reilly, M.D., of Louisville, Ky. (*American Practitioner*, Aug., 1872), recommends, in the gastric type, where exhaustion soon occurs, and cerebral symptoms are apt to set in early, calomel and bromide of potassium, with tincture of hyoscyamus, as follows: ℞. Calomel, gr. x.; Pepsine, Subnit. bismuth, āā gr. ij. M. Divide into ten parts, of which give one every hour.

℞. Bromide potassium. ʒss.; Tincture hyoscyamus, ʒij.; water, ℥j. M. S. A teaspoonful every three or four hours. The bromide of potassium acts as a brain sedative, the hyoscyamus exerts a general soothing power, while the calomel, by its peculiar purgative action, relieves gastric congestion.

In cholera infantum of the intestinal form he prescribes the following: ℞. Acetate of lead, gr. iv.; Glycerine, ʒj.; Mint water, ℥ss.; Tinct. opium, gtt. iij.; Distilled water, ʒiij. M. S. A teaspoonful every two hours, until the operations are less frequent. This alone frequently relieves the patient; but where the case is of any standing, calomel is generally required, and then he directs the following: ℞. Calomel, gr. iv.; Bicarb. potash, gr. iv.; White sugar, gr. ij. M. Divide into four parts, and give one morning and evening.

Rupture of the Urinary Bladder.—Erskine Mason, M.D., Adjunct Prof. Surgery in the Univ. New York (*New York Med. Journal*, Aug. 22d), reports in full the history of a case of this comparatively rare though most serious form of injury, with the successful treatment adopted, viz.: The opening of the bladder by means of the lateral operation as for stone.

To American surgery belongs the honor of having given to the profession this mode of treatment; and to Dr. William J. Walker, of Boston, belongs the credit of having first put in practice, and, he believes, also that of originating, this plan of treatment. It was not, however, until 1863, when Dr. Stephen Smith gave him a copy of his paper on "Rupture of the Bladder," published in the *New York Journal of Medicine*, in 1851, that he became acquainted with this plan of treatment.

That this operation is of equal service, whether the rupture has taken place either at the anterior or posterior portion of the bladder, both Dr. Walker's case and his own fully testify. Again, in both cases in which it was tried it was successful, and this is more than can be said of any other treatment, especially when so complicated as each of these was—one from fracture of the pelvis, the other from general peritonitis, with extravasation of urine into the pelvic cavity. These are the only two cases of which he can find any record of this operation having been done; and his is the only one in which laceration was evidently in the posterior portion of the organ, with extravasation into the pelvic cavity, which recovered through means of operative interference. To insure a greater chance of success from this operation, it appears needless to urge an early resort to it. Still, after some time has elapsed, it may prove successful in saving life; twenty-four hours having elapsed from the time of injury in the first case, and sixty-two and a half hours in his case, before the operation was done.

A Case of Polyuria Dependent upon an Intracranial Tumor.—The *Lyon Médical* contains the history of a case in which a boy of nineteen years passed daily twenty-five to twenty-eight *litres* of urine, which was clear, limpid, almost colorless, and contained neither sugar nor albumen. His health otherwise appeared pretty good. After a time the patient had convulsions, and still later his thirst decreased. On his admission to hospital in September, he suffered from intense cephalalgia, had impairment of motility, had an attack of vomiting, his reason became impaired, sank into a typhoid condition, became comatose, and died.

At the autopsy, a tumor about thirty *millimetres* in diameter was found in the third ventricle. All the other organs appeared healthy excepting the kidneys, which were much smaller than natural; congested and hard. Microscopic examination showed the tumor to be carcinomatous. The kidneys showed no pathological changes.

Solid Cancer of the Ovary.—James L. Brown, M.D., of New York (*American Journal of Obstetrics*, May, 1872), reports an unusual case of solid cancer of the left ovary, the patient being a married woman, aged 39. When first removed it weighed nineteen pounds, and was longer than the pregnant uterus at full term. The right ovary was also diseased and enlarged to about the size of a turkey's egg. Dr. Brown remarks that "true cancer of the ovary of any kind is infrequent, and a solid ovarian cancer of this size is of such very rare occurrence as to constitute it a sort of pathological curiosity." The nearest approach that he has been able to find to this case, in a hasty examination of the literature of the subject, occurs in Lebert's "Pathological Anatomy," where a description of what is there called an "enormous cancerous tumor of the ovary" is given, the tumor weighing eleven pounds. The plate accompanying that description so closely resembles the appearance presented by this tumor when first laid open that it might readily pass for a faithful likeness of it.

Chronic Conjunctivitis.—Dr. J. H. Hollister, of Ill. (*Med. Examiner*), mentions a case of chronic conjunctivitis, which was rapidly cured by the application of an ointment of the biniodide of mercury to the outside of the eyelids.

Hæmatoxylin as a Staining Material for Animal Tissues.—J. W. S. Arnold, M. D., of N. Y. (*Phila. Med. Times*), describes a process which does away with the two objections raised against carmine. The coloring matter of logwood (hæmatoxylon campechianum) is one of the most valuable staining materials known to him. It was first used by C. F. Müller, in his investigations on the cornea. The ordinary logwood extract is finely pulverized in a mortar, and about three times its bulk of alum (in powder) added. The two ingredients are well rubbed up together and mixed with a small quantity of distilled water. The *complete admixture* of the alum and hæmatoxylin is necessary, and this will require fifteen to twenty minutes' vigorous stirring.

More water may now be poured on, and the solution, after filtration, should present a clear, somewhat dark violet-color. If a dirty red is obtained, more alum must be incorporated, and the mixture again filtered. By always having an excess of both alum and hæmatoxylin in the mortar a saturated solution can be obtained, which, after infiltration, may be combined with alcohol—one ounce of the logwood fluid with two drachms of seventy-five per cent. alcohol. He has found that a much better color can be had by allowing the mixture, after thorough trituration, to stand for several days before filtering and adding the alcohol. Should a scum form on the surface of the liquid after it has been some time made, a few drops of alcohol and careful filtering will be all that is required. With a strong solution the coloring is very rapid, requiring but a few minutes; whereas if a slower tinting be desired, the fluid may be diluted with a mixture of one part alcohol and three parts water. Whether the tissue has been previously hardened in alcohol or in any of the chromo compounds, it is colored equally well—the nucleus of a most brilliant purple, the cell-body of a distinct neutral tint. An *over-staining* causes an almost perfect blackening of the nucleus, while the protoplasm becomes purple. As to the stability of the coloring, he remarks that specimens tinted and mounted in December, 1869, show as perfectly as when first put up.

He concludes with the subjoined method of treating pathological new formations (histoid tumors), etc.

The cut is placed for the required time in the hæmatoxylin fluid, and is then immersed in distilled water to remove the crystals of alum, which might otherwise adhere to the surface of the tissue. From water the section is transferred to seventy-five per cent. alcohol, when, after soaking for from ten to fifteen minutes, it is clarified in light oil of cloves, and may be either mounted immediately in balsam dissolved in chloroform, or in damar varnish.

Removal of Foreign Bodies from the Ear.—The *Berliner Klin. Woch.* (No. 9, 1872) contains an article by Dr. Löwenburg, of Paris, on this subject. Three cases are therein reported to show the injurious results of the ill-directed attempts at removal which are generally instantly made when the foreign body is complained of. In fact such attempts may give rise to inflammatory effusion, which forms a bulging ring around the foreign substance. Dr. Löwenburg also shows that foreign bodies may remain in the outer ear for several weeks without occasioning great discomfort. Also, that although the foreign body, or the instruments used to remove it, sometimes perforate the membrana tympani, this membrane may eventually recover its integrity; such perforation being proved by the reappearance at the mouth or nose of water injected into the ear, or by forcible expiration when the latter are closed, causing bubbles of air to form in the water left in the meatus after injection.

When injections of water, according to the usual method, fail to bring away the foreign body, the author resorts to *agglutination*. To do this a stem delicately surrounded with lint, the end of which is slightly unravelled, is dipped into carpenters' glue, none of the glue being allowed to adhere to the sides of the stem. The instrument is then to be passed carefully into the meatus and the glue brought in contact with the foreign body and allowed to remain at rest for from fifteen minutes to an hour, by which time the attachment becomes so firm that, by careful management, both stem and the object can be extracted together.

Removal of Naso-Pharyngeal Tumors.—In order to gain access to the posterior nares and pharynx for the removal of tumors, Dr. Von Bruns, of Tübingen, operated in the following way:—A horizontal incision is made along the upper lip (of a sufficient height to avoid wounding the mucous membrane) from a point a few *millimetres* below the right ala nasi to the level of the first molar tooth; a second incision is then made along the naso-frontal suture; and a third is curved obliquely down on the left side to the end of the lower incision. The base of the nasal spine is divided by a saw, and the septum is then cut through by bone-forceps, after which the bony parts are carefully sawn and the right nasal bone is raised from its union with the maxillary. The whole nose can then be turned over on the right cheek, and replaced after the removal of the tumor. Half only of the nose may be treated in the same way by making the division between the nasal bones, and leaving the septum and the parts on the sound side uninjured. Dr. Von Bruns has employed this method in three cases. In one of them it was necessary to keep the nose displaced for three weeks; but at the end of that time, after the edges had been freshened, union rapidly took place. He thinks this mode of operating facilitates the removal of tumors and the arrest of hemorrhage; that it gives the surgeon the opportunity of watching the part for some time, so as to perform any further operation that may be necessary; and that recovery takes place soon and without any impairment of function.—*Berliner Klin. Woch.*, Nos. 12 and 13, 1870. *Br. Med. Jour.*

The Pathology of Contracted Kidney.—At a recent meeting of the Royal Med. and Chirurg. Society, Sir William Gull and Dr. Sutton read an elaborate paper "On the Pathology of the Morbid State commonly called Bright's Disease with Contracted Kidney." The paper, which was illustrated with numerous drawings, contained an account of their investigations on the morbid changes in the small arteries, principally those of the pia mater. They agreed with Dr. George Johnson that there was thickening of the coats of the arterioles; but they differed from him in that they attributed this thickening to a deposit of "hyalin-fibroid" material outside the muscular coat, and not to the hypertrophy of the arterial muscular structure which has been described by Dr. Johnson as the result of the renal disease. This "hyalin-fibroid" deposit they regarded as not originating necessarily in the kidney, but as a morbid state coincident with senile decay, affecting the vascular system, in different parts of which it presents itself; the kidneys being affected more frequently on account of their relatively greater vascularity; the disease being called by them arterio-capillary fibrosis. According to this view, "Bright's disease with contracted kidney" is only a manifestation of a general morbid condition; and the changes in the vessels, instead of being, as Dr. Johnson teaches, consequent on the urinary disorder, are antecedent to it. Dr. Johnson defended his views in the discussion which followed, and in a subsequent letter to the *British Med. Jour.* explained that the changes presented by the specimens exhibited by Drs. Gull and Sutton were more likely due to the action of the glycerine in which they were preserved upon the *tunica adventitia* of the arteries than to the causes mentioned by them. Other writers support the theory of Drs. Gull and Sutton, and there is prospect of further discussion.—*Ibid.*

Lithiasis.—Leonidas Crews, M.D., Valdosta, Ga. (*Atlanta Med. and Surg. Journal*, June, 1872), in lithiasis, with frequent micturition, ardor urinæ, etc., without renal or cystic calculi, has repeatedly given bromide of potassium with tincture of belladonna, and can confidently recommend them.

Hemorrhagic Malarial Fever.—B. M. Cromwell, M.D., Albany, Ga. (*Atlanta Med. and Surg. Journal*, June, 1872), says that the general principles of treatment are to avoid all remedies that tend by their action to depress the prostrated vital functions; to restrain vomiting, assuage thirst by the free use of ice; and to guard against chills by the generous use of quinine. In addition to this, the most successfully treated cases which came under his observation were those in which lime-juice and iron were freely used; the lime-juice because its beneficial effects are well known in scurvy, a kindred disease, and iron as furnishing a ready means of converting white into red corpuscles. He has seen mischief follow the use of morphia, or the preparations of opium, in checking the feeble eliminative process going on at the time. He also remarks, as a peculiarity of the disease, that its ravages have been almost exclusively confined to what is regarded as the healthiest portion of the country—the pine woods.

Vaccination a Proof against Small-Pox.—Jas. F. Weeds, Surgeon U. S. Army (*Nashville Journ. Med. and Surgery*, August, 1872), in a valuable paper on "Vaccination," etc., firmly believes, with the majority of the profession, that vaccination and re-vaccination, properly performed, renders complete protection against small-pox, and that wherever the disease exists, it is in consequence of this operation having been insufficiently and improperly performed. Those who deny the protective power of vaccination, with the multitude of incontrovertible evidences to substantiate it that have accumulated from all parts of the world, through a period of three-quarters of a century that has elapsed since its discovery, would discredit the propositions of Euclid, and deny the correctness of the multiplication table.

Epidemics of small-pox find their victims among the unvaccinated, and the imperfectly and insufficiently vaccinated. Wipe out these classes, and at the same time epidemic small-pox will be wiped out. The fault is not in the defective power of vaccination, but in the imperfect and incomplete manner in which it is used.

Belladonna in Opium Poisoning.—A case of resuscitation from opium poisoning by enemas of solution of belladonna, until ten grains were given, is mentioned by Dr. R. D. Bone, of Larissa, Texas (*Nashville Journ. Med. and Surgery*, August, 1872). The patient was a child, aged seven months, who, through mistake of the mother, took two grains of morphia solution. When first seen it was in a state of profound coma, complete anæsthesia, livid and cold surface, pupils contracted to a mere point, no perceivable circulation in extremities, breathing stertorous, and from two to four respirations per minute. In two hours afterwards the child cried, and entire recovery followed. Although the *certainty* of the antidotal effects of belladonna in opium poisoning may be questioned, he is confident, in this case, it was the medium through which the effects of the morphia were displaced, and the life of the child saved.

The subsidence of such a profound condition upon the appearance of the therapeutical action of the belladonna, would hardly fail to convince the most doubtful as to its potency in like cases, and justify the repetition of the practice.

Dr. N. G. M. Walker, of Texas, relates a case where tincture of opium was taken for suicidal purposes, in which belladonna thrown into the stomach had the happiest effect.

The Theories of Evolution.—Rev. William T. Gibson, Editor of the *Church Journal (American Journal of Insanity*, July, 1872), in his third article on this subject, remarks upon the late paper of Professor Huxley in the *Contemporary Review*, styled, "More Criticisms on Darwin: and Administrative Nihilism," and expresses his gratification at finding how little even the ablest writer among the advocates of Mr. Darwin's theory has to show by way of real answer to the arguments of A. K. Wallace and St. George Mivart, F.R.S., in their papers on the "Contributions to the Theory of Natural Selection," and "The Genesis of Species."

In the January and April numbers of this Journal, Mr. Gibson brought together the various arguments which constituted a valid array of objection to Mr. Darwin's Theory of Evolution by Natural and Sexual Selection, especially as relied upon to determine the question of the origin of man. Those arguments were derived from the three departments of science, commonly understood as zoölogical, psychological, and ethical.

The Administration of Anæsthetics.—David Webster, M.D., House-surgeon to the Manhattan Eye and Ear Hospital, New York (*New York Medical Journal*, August, 1872), having been requested to note down, in each case, the length of time from the first inhalation of ether to the commencement of the operation, and the recurrence or absence of vomiting, places the results of his observations in one hundred cases before the profession: Average length of time occupied in producing anæsthesia, 5.84 minutes. The shortest time recorded is one and a half minute, in the case of a child; the longest is twenty minutes. Vomiting occurred in 42 per cent. of the cases. His impression is, that the average quantity used was from four to six ounces. In most cases the patient had eaten no dinner, the inhalations occurring during the afternoon. In giving ether in this hospital, a newspaper cone, lined with a towel, is always used. Three persons are generally necessary in giving ether to an adult—one to manage the cone and the patient's head, and an assistant on each side to hold him in case he struggles violently. This they can best accomplish by placing one hand on his shoulder, while with the other they seize the wrist. The vast majority of hospital patients resist more or less violently during the stage of excitement, while the reverse seems to be true of the more intelligent and better-trained cases met with in practice.

He remarks, in giving ether, that the newspaper cone should be held a little way from the patient's nose while he takes the first two or three inspirations, so that the ether may be at first largely diluted with air. The struggling once commenced, however, more ether should be poured into the cone, the air more perfectly excluded, and the patient hurried through this disagreeable stage as rapidly as possible. His countenance should be narrowly watched, however, and his breathing assiduously attended to. The moment the face commences to assume a purple or dusky hue, the ether should be at once removed, and the tongue drawn well forward by means of a tablespoon-handle, or whatever else may be convenient. This is usually sufficient to re-establish a healthy breathing, and due oxygenation of the blood. But, if it fails, artificial respiration should be resorted to, and cold water dashed in the face.

In Dr. Agnew's service he has given a mixture consisting of one part of chloroform and four parts of ether to thirteen patients. The average length of time in producing complete anæsthesia was three minutes. The average quantity of the mixture consumed was two ounces. Vomiting occurred in only three cases out of the thirteen. Three patients had eaten their dinners, but in neither of these did vomiting occur.

The general feeling among the surgeons of this institution seems to be that chloroform is dangerous, and that its indiscriminate use as an anæsthetic is unjustifiable.

Poisonous Effects of Animalcula.—J. P. Brown, M.D., Galt, Ontario (*Canada Lancet*, Aug. 1872), reports several severe cases of poisoning produced by drinking freshly churned buttermilk, which, on microscopical examination, exhibited large numbers of animalcula. The conclusions which he draws are: 1. That in addition to the chemical tests used, the long interval which elapsed between the imbibition of the milk and the commencement of the symptoms, would preclude the possibility of ordinary irritant poisoning. 2. The presence of animalcula would preclude the same; as the existence of poisonous matters in the milk would, in all probability, prove fatal to insect life. 3. That the animalcula were the real evil; and that he is of the impression that the germs or ovula which produced them, were in the water drunk by the cow which produced the milk. The animalcula were from 1-5,000th to 1-7,000th of an inch in diameter. Remembering the immeasurable difference in the size, which always exists, between the germ or ovum and the fully developed living being, he thinks it is quite possible for the germ of the animalcula to be so small as to pass without obstruction through the lacteal and lactiferous absorbent systems; and that too without breaking any well-established physiological law.

"Hygromatous Cyst" of Von Ammon.—Wm R. McMahon, M.D., of Huntingburgh, Ind. (*Med. and Surg. Reporter*, July 27, 1872), mentions an unusual case of congenital cyst of the neck, filling the space between the upper part of the sternum and chin in a child four days old, which was cured by a seton composed of two strands of surgeon's silk saturated with tincture of iodine, and external pressure, commensurate with the comfort of the child. The seton was not introduced until nearly three months after the birth of the child. The obliteration of the cyst was perfect, and the only mark left to designate the site of this formidable tumor was simply a slight redundancy of tissue.

A Large Uterine Tumor.—Dr. Wm. B. Atkinson, of Philadelphia (*Med. and Surg. Reporter*, July 27, 1872), exhibited, at a recent meeting of the Philadelphia County Medical Society, a tumor weighing about thirty pounds, removed from a woman who died on the ninth day after delivery. The delivery was natural, no suspicion of such a tumor being present. Death resulted from pyæmia, and was very rapid. The diseased mass occupied the posterior wall of the uterus, and was much disintegrated.

Caries of the Astragalus.—At the June meeting of the Central New York Medical Society, held in Rochester, Dr. E. M. Moore (*Med. and Surg. Reporter*, July 20, 1872) read the history of a patient, a case of chronic suppuration of the ankle-joint, which proved to be "caries of the astragalus." This was removed by crushing the bone and removing the fragments. The wound not healing perfectly, it was reopened, and the diseased end of the tibia removed. The patient then exhibited the joint, which was a good one. The deductions made by Dr. Moore were, that in similar cases, and those of compound dislocation of the ankle-joint, the removal of the astragalus would be the course which he would pursue.

The Efficacy of Mud-Baths.—Grace Greenwood, Cal. correspondent of *The New York Times*, from experience, believes in the efficacy of these baths, and extols the Indian baths at the Geyser Springs, a California retreat, situated 1,690 feet above the level of the sea. At Saint Amand, in the upper part of France, there are quite a number of renowned mud-baths which are supposed to be salutary for atrophy, rheumatism, and diseased articulations.

Poisoning by Cantharides.—L. B. Kline, M.D., of Catawissa, Pa. (*Medical and Surgical Reporter*, July 20, 1872), relates a case of poisoning by upwards of fifty grains of this remedy. When first seen, the patient, female, had already been relieved by emesis. With the object of neutralizing whatever of the cantharides might remain in the stomach, he administered charcoal; and also ordered the following: ℞. Tr. opii, Tr. camphor, Buchu ext. fl., Spr. æth. nit., āā f℥ ss. M. S. One teaspoonful to be taken for a dose.

A few powders of morphia were also used in connection. The symptoms were soon relieved, and in the course of a few hours she was comparatively recovered. A noticeable feature in the effects of the cantharides was its action upon the pulse, causing it to fall to about fifty per minute.

Treatment of Pelvic Peritonitis and Peri-uterine Cellulitis.—Dr. James L. Brown, of New York (*Am. Journ. Med. Sciences*), observes in regard to the treatment of these affections that the acute stage should be treated on general principles; anodynes, local depletion, fomentations, and sedatives are the chief therapeutic agents. After this stage has passed, the most efficient means of causing the absorption of the products of inflammation are, for both affections, successive fly-blisters over the hypogastrium, and the copious use of the warm vaginal douche every night and morning. The best apparatus for this is a keg that will hold two or three gallons, having an india-rubber tube attached to the stopcock. This keg, being filled with water as warm as the patient can bear, is placed upon a shelf ten or twelve feet high; the patient being suitably arranged on a lounge or chair underneath, the free end of the tube is introduced high up in the vagina, and the water allowed to flow in a constant stream against the pelvic roof and the neck of the uterus. The rapid improvement that follows the use of these means in the majority of cases is astonishing even to those who have had much experience in the use of them.

The whole number of cases of which he has kept a record is eighty-seven. Of these, however, twenty-two are so incomplete as to be of very little value. The remaining sixty-five give the following results:—

	Cellulitis.	Peritonitis.
Whole number of cases	49	16
Acute cases	9	7
In married women	44	13
In single women	5	3
In nulliparous women	10	6
Tumor on right side	17	1
Tumor on left side	28	1
Tumor on both sides	4	14
Following labor or abortion	11	5
Following operations	5	4
Cause not ascertained	33	7
Resulting in suppuration	3	1

Nitrite of Amyl in Puerperal Eclampsia.—Wm. F. Jenks, M.D., Philadelphia (*Philadelphia Med. Times*, August 1, 1872), narrates a case of this affection which was immediately and satisfactorily overcome by the inhalation of nitrite of amyl.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE SANITARY CONDITION OF OUR PUBLIC SCHOOLS.

Considering the large number of children in the public schools of New York, any questions connected with their sanitary condition are of great interest. Bearing upon such questions we have several useful and practical suggestions in the first annual report of Dr. R. J. O'Sullivan, Physician to the Board of Education. The appointment of this gentleman to this position was a peculiarly appropriate one, as is now shown by the thorough manner in which he has discharged his duties. There was no better opportunity for proving the efficacy of competent medical supervision of the sanitary condition of the schools than was afforded by the recent prevalence of small-pox, and the urgent necessity of a thorough and systematic vaccination of every scholar. The requisite amount of authority to enforce suitable regulations was centralized in a single individual, just at the critical moment when such services were most needed. The result has been that the majority of the pupils were not only vaccinated without much if any of the usual opposition, but vaccination as a preventive of small-pox was popularized. This latter effect grew out of the practice of having no child vaccinated without the consent of its parents. The procedure was thus robbed of that obnoxiousness which in the eyes of prejudiced persons is always associated with the compulsion of sanitary laws.

There is now a by-law which requires that principals of schools should ascertain the evidence of vaccination, but this as at present framed cannot possibly meet the necessity. We agree with the author of the report that the certificate of a medical man should be the only conclusive evidence. When such a system is thoroughly inaugurated it would be quite possible to establish a rule similar to that in force in the Eastern States, which requires a certificate from every pupil before admission.

In proof of the efficacy of the school vaccination Dr. O'Sullivan states that upwards of forty thousand children were vaccinated during the last year, and not one instance of small-pox has been known. The great majority of the vaccinations were, however, secondary.

In regard to the subject of ventilation, not too much can be said against the crowded condition of the class-rooms. We can easily speak within bounds when we say that there is hardly a class-room in any of the Primary Departments which has the requisite degree of air space. In many instances, as is shown in the report, the only communication with the outside atmosphere is by means of alley-ways already tainted by the close proximity of large tenement-houses or livery stables. Coupled with defects in ventilation we notice that many of the class-rooms are so imperfectly heated as to be untenable during severe weather. The defective condition of the water-closets is another matter which has been proven by inspection, and for which the necessary remedies are suggested.

Comparing the present condition of our public schools with what it was a quarter of a century ago, we have great reasons for congratulation. Our school buildings are more commodious, the air space has been relatively increased one-half, and the accessories in the shape of improved arrangement in heating, and the disposition of latrines, etc., are, comparatively speaking, excellent. But that more is needed in the same direction the details of the report of Dr. O'Sullivan very satisfactorily prove. We have every reason to hope that the Board of Education will not be backward in giving a practical turn to the suggestions therein contained, and maintain the reputation which it has already so well earned.

Sanitarians may make every effort in the way of having the sanitary regulations of our schools perfect, the air space may be sufficient, ventilation perfect, the water-closets inodorous, and the heat may be regulated by the degrees of the thermometer; but what will all this avail so long as the hours for confinement to school exceed the time actually necessary for study. Very seldom is this matter viewed in its proper sanitary light. The pupils of our public schools are for the most part the offspring of the lower and middle classes, and are generally sent to these institutions as much for the purpose of relieving their parents of the care of them during the greater part of the day, as for purposes of mental improvement. Generally speaking, the greater the number of hours that the children remain during the day, the greater is the satisfaction of their parents and guardians. Every one of ordinary intelligence knows that this is all wrong. The supposed benefits are more than counterbalanced by the evils. In a physical sense nothing retards the natural development of children so much as confinement. In a well-regulated school this latter condition is so essential to what is called discipline that it is impossible to separate the two. In a word, the hours spent in school represent so many hours during which the child is under restraint. It

should be the aim of every well-wisher of the future generation to reduce this time of daily attendance upon school to the minimum consistent with the proper attention to study required at a given age. We are convinced, if the reasonable standard were reached, that the hours at school would be actually decreased one-third —to the benefit of both teacher and scho'ar. We are pleased to see that the visiting physician is fully alive to this necessity and that he earnestly advises "frequent recesses and a shortening of school hours in primary schools." It is gratifying to notice that the Board have appreciated this necessity, to some extent at least, and have acted accordingly, the regulations last year being that such schools were dismissed at 1 P.M. Bearing upon the same point, he remarks as follows:—

"In warm weather, during the noon recess, the pupils are exposed to the intense heat of the sun at the hottest hour of the day, and in winter season they are exposed to the danger of catching colds. I have asked the opinion of some of the most experienced Principals in the Primary Departments on this subject, and have been invariably informed that to dismiss the young pupils early could not fail to be beneficial to them physically, while at the same time it could not materially interfere with their progress in their studies."

Another bane of the public school system is the practice of sending very young children to the schools. We have ourselves seen some of these little ones toddling to their classes who could scarcely articulate intelligibly, and yet these babies must take their places alongside of children of twice their age and be subjected alike with them to all the necessary rules of restraint and mental drill. A visit to any of these infant classes in our primaries is calculated to inspire nothing but pity for these little sufferers. We are told that it is the rule among the laboring classes to send their children to school as soon as they can walk there; and not only that, but it is very frequently noticed that these infants are taken away before they have even completed a primary course: this period of attendance upon school being the only one which is considered necessary for an education. For such scholars we cannot advise even a shortening of school hours with any hope of benefit to them physically or mentally, nothing short of a total absence until the proper age is reached. The rule, in our opinion, should be that no child should be sent to school under seven years of age. The experience of educators has proved the fallacy of forcing youthful intellects, and settled the question that no time is lost in allowing the scholar ample time for bodily development. If it were a rule that no child under seven years should be allowed to attend school, it would redound to the credit and good sense of such as form the present Board of Public Instruction. We would respectfully call the attention of the visiting phys'cian of the Board to this point, in the hope that he may officially gain the ear of the authorities.

Alumni Associations.

The influence which Alumni Associations exert over their alma mater is traditional. During the past year we have had a striking evidence of this in the graduation of an improper person by the Medical Department of the University of this city. No sooner was the charge made than the Alumni of that institution undertook a thorough investigation, with the results of which our readers are already familiar. We have no desire to rehearse an old story, but simply wish to refer in this connection to the necessity of keeping alive these Associations, and making them, if possible, stronger and more influential. In order to do this effectually a carefully prepared catalogue is very necessary. The College of Physicians and Surgeons, and the Bellevue Hospital Medical College have done much in this direction, but the University, in our judgment, has presented us with a catalogue which is a model in every way, and which for accuracy, thoroughness of detail, and all other essential requisites, is the best of its kind we have seen from any Medical College. This Association with others of its class has already proved itself a power, but more remains to be done. They should have a direct voice in the management of the affairs of their respective colleges. Why cannot they secure a suitable representation in the council? This is certainly very desirable from many points of view, and would be the best means of giving a practical proof of the real usefulness of these Associations.

The Acquittal of Dr. Schœppe.

The final acquittal of Dr. Paul Schœppe, of Carlisle, Pa., of the charge of poisoning a patient, carries with it a very significant lesson to would-be medical jurists. Three years ago the charge was made against the doctor on evidence of such a surprisingly unscientific character as to poison that the only explanation of conviction was founded upon the reasonable suspicion of a blinding prejudice on the part of the jury and court. Perhaps no really innocent person ever so narrowly escaped the halter. The case for the prosecution was intrusted to would-be experts, who, perhaps with the best of intentions, were so lamentably ignorant of the general principles of medical jurisprudence as to give them a fourth-rate grade among intelligent practitioners. Happily for Dr. Schœppe, in the final trial he was able to summon to his aid such gentlemen as Prof. H. C. Wood, Jr. of Phila., and others, who succeeded in triumphantly disproving every point made by the prosecution.

When we consider how a precious human life might have been sacrificed by the former medical bungling in this case, we cannot as a profession take the lesson too much to heart, and too strongly insist that in future all questions of a similar import be left to experts alone.

Reviews and Notices of Books.

Diseases of the Throat: A Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx, and Nares. By J. Solis Cohen, M.D. New York: William Wood & Co. 1872.

Diseases of the throat and of the upper portions of the respiratory tract are of such frequent occurrence and of such an inveterate character, that their pathology and treatment have of late years called forth great attention and study. These affections have long been an *opprobrium medicinæ*, and many were the persons who suffered greatly from them in consequence of the lack of knowledge on the part of the practitioner of their nature and of the methods of treatment applicable. The general practitioner was generally consulted, but his treatment was usually of a desultory character; consequently patients went on suffering from these very troublesome chronic diseases. The result of this ignorance in treating these affections was, that many skilful physicians on the continent took up their study zealously and have since done much to spread sound views both as to their pathology and treatment. So that to-day we find a class of diseases which ten years ago were shunned, are now treated with skill and science, and in fact their treatment is elevated into a specialty. Among the first to pay special attention to this branch in this country was Dr. Solis Cohen, of Philadelphia, whose articles upon the treatment of throat diseases have done much to interest the physicians in their study as well as to guide them in their treatment. Our author has also proved himself equally as learned in the nature of these diseases, and as skilled in their treatment as any of our transatlantic brethren. During the past few years the literature of this subject has gradually become very extensive, so that there now exist articles and monographs upon every division of it, yet a full practical treatise was wanting, and this want has become recently very apparent and pressing, for the reason that a person desiring to familiarize himself with the subject was compelled to consult such a number of articles, many of which were inaccessible, and besides this disadvantage, there was an entire absence of system among them, so that if the physician was not previously somewhat informed on the subject he met obstacles at every stage. To supply this want Dr. Cohen has written the work under consideration, and he again places the profession at large under obligation to him. In his preface he tells us that his researches have been mostly in a clinical direction, and that the pathological portion of his work may be somewhat lacking; yet a perusal of the book shows us that this is really an advantage, as we have here what is most needed, a strictly practical treatise.

The first six chapters of the work treat of diseases of the throat, and, in the main, cover the ground admirably. The first chapter, devoted to general considerations, is clear and explicit; while the second, treating of the methods of examination and of the minute anatomy, is certainly admirable. The chapter on sore-throat will be read with much interest. Dr. Cohen divides this trouble into the *common erythematous sore-throat, the phlegmonous sore-throat, the ulcerated sore-throat, and the membranous sore-throat*, and his clinical descriptions of them are clearly drawn, and their treatment is concisely but very lucidly laid down. The chapters on diphtheria, the sore-throats of the exanthemata, of syphilis, and that from burns and scalds, will materially assist the practitioner in diagnosis and treatment. The chapter on affections of the tonsils contains a brief description of the various morbid conditions of these organs, particularly of their chronic hypertrophy, the treatment of which is quite fully entered into. We find that Dr. Cohen prefers excision, but that he also uses the galvano-cautery. The affections of the palate and uvula are treated of in seventy-eight pages, and, on the whole, the subject is well handled. Dr. Cohen classifies the affections in a simple manner, and describes them very clearly and tersely. That portion of the subject relating to cleft-palate, glandular hypertrophy at the vault of the pharynx, and naso-pharyngeal tumors, is particularly full and well done, and the same may be said of the description of chronic follicular pharyngitis. After a very clear description of the structure of the nasal mucous membrane, we find short but admirable chapters upon various morbid conditions, the study of which will be found to be rendered much easier by the simplicity of arrangement. The various operative procedures for their relief, and the most approved applications are fully described, as well as the necessary instruments. We think that this portion of the work is particularly valuable, as there exists at the present time such a discordance of views on the subject of douches and applications, for the reason that we have not had a book or monograph treating fully of the subject, consequently the inquirer was forced to consult numberless articles, many of which, in point of treatment, were diametrically opposed to one another. This chaos now exists no longer, as the whole subject is so well treated by Dr. Cohen. The various affections of the larynx are described at considerable length, and, without particularizing, we would say that the anatomy, modes of examination, the various operations, the necessary instruments, are all fully described, while the clinical descriptions are admirably clear and true. In fact, here within a small compass we have a brief but quite complete treatise upon these frequently occurring affections. At the end of the book we find a very voluminous bibliography, which fully attests the author's familiarity with his subject. In conclusion, we would say that Dr. Cohen's book supplies a want long and urgently felt. His descriptions of diseases are clear and accurate, while his directions for treatment are simple and practical. On the whole, we know of no particular branch of medicine which is more fully supplied by a text-book than that of throat diseases is by Dr. Cohen's book. The style is clear and terse, while the general arrangement of the subject is admirable.

The mechanical portion of the work is excellent, as to paper, printing, and binding; and the illustrations, to the number of one hundred and thirty-three, materially enhance its value.

The Correct Principles of Treatment for Angular Curvature of the Spine. By Benjamin Lee, A.M., M.D. Philadelphia: Lippincott & Co. 1872. 12mo, pp. 77.

It is the misfortune of Mechanical Medicine that its promoters have, for the most part, been rather mechanicians than scientific men. Lacking the conservative influence of general education and professional knowledge, they have generally become votaries of partial and limited ideas, and not seldom charlatans.

It is with pleasure, therefore, that we welcome this modest little book from the pen of so well-trained and faithful a student as Dr. Lee.

The labors of such trustworthy gentlemen as Davis, Taylor, and the author, are of the highest advantage to those whose opportunities and engagements have not permitted them to pursue this important line of study.

These two lectures upon "Antero-posterior Support" and "Modified Suspension" consider the subject in the light of its Pathological Anatomy, Physiological Anatomy, and Mechanics, illustrated by diagrams and a few well-told and very successful cases.

The author does not, with Rokitansky, believe that tubercle is commonly the determining cause of the ulceration, but regards the caries both in the vertebra and intervertebral cartilage as a sequel of acute inflammation.

It seems to us that this view is supported by what we know of the etiology of morbus coxarius. We have not observed that this disease is very closely associated with the tubercular diathesis. Were it so, we should not see it often relieved, and sometimes in its early stages cured, by intestinal revulsion. Nor should we expect that so many tuberculous subjects would so long endure and so often surmount the depressing influences of protracted confinement and irritative fever. The mechanical appliances of Dr. Lee could not be explained in a brief notice. They are not mainly new, but the careful reasoning which projected, and the discrimination which regulated their use, evince a thorough study of all the conditions involved.

CANCER: ITS VARIETIES; THEIR HISTOLOGY AND DIAGNOSIS. By HENRY ARNOTT, F.R.C.S., Assistant Surgeon to St. Thomas's Hospital, and Joint Lecturer on Morbid Anatomy in the Medical College. Illustrated by lithographic and wood engravings, from drawings by the author from Nature. Philadelphia: Lindsay & Blakiston. 1872.

ONE of the most conspicuous results of medical study in modern times has been the separation of distinct morbid processes formerly grouped together as one disease, and the arrangement of them under new headings with appropriate names. It is not necessary to mention other diseases than phthisis and the continued fevers as illustrations of this assertion, and it is evident that this work of elimination is still incomplete.

In the work of Dr. Arnott a similar effort has been made, and we consider this small volume one of the most practical and interesting which has recently appeared upon the subject of cancer.

The substance of this work was originally contributed in several papers to the *Medical Times and Gazette*, and these remodelled, and, with additions, are contained in the volume before us. As Surgical Pathologist and Registrar at Middlesex Hospital for some years, the writer had excellent opportunities for the study of his subject.

It is well known that Lebert's doctrine of a specific cancer-cell finds at present few, if any adherents. "Cells which are microscopically indistinguishable from those of scirrhus may be found in granulations, in certain sarcomata, in granular growths, and even in healthy parts, as the pelvis or the kidney and the prostate." In our own country and in Europe the question now is as to the source of these cells. Do they arise from epithelium, from connective-tissue corpuscles, or white blood-cells? Koester believes them to originate from the lymphatic endothelium; but Dr. A. A. Woodward, in his recent "Report to the Surgeon-General of the United States Army on the Minute Anatomy of two Cases of Cancer," with photographic illustrations, does not subscribe to Koester's view. He says: "I am not satisfied, either by my own examinations or by the study of Koester's paper, that they can be justly considered the progeny of the lymphatic endothelium. A view which should regard them as transformed white corpuscles accumulated in the lymphatic passages, appears to me, if anything, a more probable interpretation." He believes, however, that whatever be the origin of the cells, the "cancer cylinders" are "conditioned in form and direction by the pre-existing lymphatic passages."

After referring to the vague use of the term "cancer," and the defects of a clinical classification, Dr. Arnott defines malignancy as "such an energy of growth as baffles in a greater or less degree the surgeon's interference." He also defines three degrees of malignancy which it is not necessary here to specify. This word malignant is one which is frequently employed without a satisfactory idea as to its meaning. If by the term is intimated destructiveness to life, the adjective is often more applicable to benign tumors than to those which bear distinctive marks of cancer, and which run a course to be numbered by years. Probably with increased knowledge of minute anatomy or cell development, this word will be less frequently used. Dr. Arnott's definition seems, in the main, an accurate one, and the remarks with regard to the different degrees of malignancy are of much practical interest.

Clear directions are given for making sections of tumors, and hints as to the value of scrapings for diagnostic purposes are added; then, after stating that the cell of scirrhous and medullary cancer is in all respects identical, he gives to these "most cancerous of cancers" the distinctive term of *carcinoma*. Carcinoma is defined as "*a tumor in which a more or less dense fibroid growth forms a sponge-like or cavernous framework, whose alveoli are filled with loose cells of an epithelial type, grouped together disorderly, bathed in a clear fluid, and having no visible intercellular material.*" He states that this definition differs from that of MM. Cornil and Ranvier, in describing the cells as of an epithelial type, in insisting upon their disorderly arrangement, and upon the absence of visible intercellular substance. These views are also in harmony with those of Virchow, Lücke, and Rindfleisch. He then carefully describes the stroma and cells of carcinoma, and illustrates by a diagram the different periods of development, maturity, and decay.

The author then considers these varieties of cancer, such as villous, hæmatoid, melanotic, and colloid, whose distinguishing features are caused by "degenerative processes or other accidental conditions." He believes that these characteristics are in many instances a very insufficient ground for applying special names to the tumors which exhibit them, while he thinks that colloid is often confounded with myxoma, or one of the tumors of mucous tissue.

Having considered carcinoma, the writer passes to notice a number of malignant growths, "which in their intimate structure are essentially distinct from carcinoma, although generally coupled with it by English surgeons under the comprehensive title, cancer." The most important of these are divided into two groups—sarcomata and epitheliomata; and he expresses the opinion that "by far the greater number of 'soft cancers' and 'firm medullary cancers' recorded in English publications are really sarcomas."

He regards the sarcoma as "a tumor made up of embryonic tissue, which may tend towards development into a perfect tissue. Hence a *sarcoma is almost entirely a cellular growth, with more or less of visible intercellular substance*, and the cells are usually of a spindle or fusiform type."

The different varieties of sarcomata are then carefully considered and illustrated, but there is not space in this review for enlarging upon this division. The descriptions are clear, and the language is not exuberant.

Epithelioma presents the one essential anatomical feature "of *proliferating* epidermal cells in abnormal situations." Under the epithelioma he ranges "rodent ulcer," or "rodent cancer," as Mr. C. H. Moore styled it, differing from Mr. Moore in his views as to the position which this disease should occupy. He thinks that although it sometimes presents "clinical features which sufficiently warrant its being grouped amongst the cancers, yet does not seem to me to possess any properties, either clinical or anatomical, which justify its being placed in a distinct class by itself."

In the concluding chapter, the relative value of some diagnostic points, such as age, cachexia, family history, and pain, are considered; and the microscopical investigations contained are shown to be of practical utility. With an increased knowledge of the intimate structure of tumors, he believes that our efforts for cure will be more satisfactory; and he makes the hopeful assertion that it is a "matter of history, that hosts of tumors *have* been permanently arrested in their progress, and it is also a matter of history that amongst these have been included not a few instances of genuine cancer."

In closing this review we would recommend those who are interested in malignant tumors to read this work. It is not a collection of many words enveloping few ideas: little, if any, language is wasted; and one rises refreshed from the perusal.

New Instruments.

A NEW WIRE SPECULUM FOR VAGINA AND RECTUM.

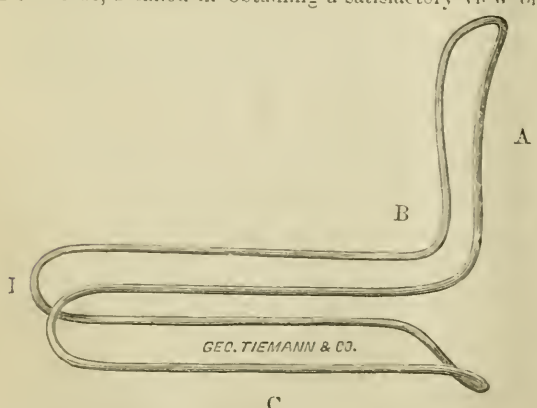
ALSO,

A NEW SELF-RETAINING MALE URINARY CATHETER.

By GREENSVILLE DOWELL, M.D.,

GALVESTON, TEXAS.

The following cut represents a speculum I invented two years ago to examine a colloid cancer of the rectum. I had tried all the usual specula, and despite everything I could do, I failed in obtaining a satisfactory view of



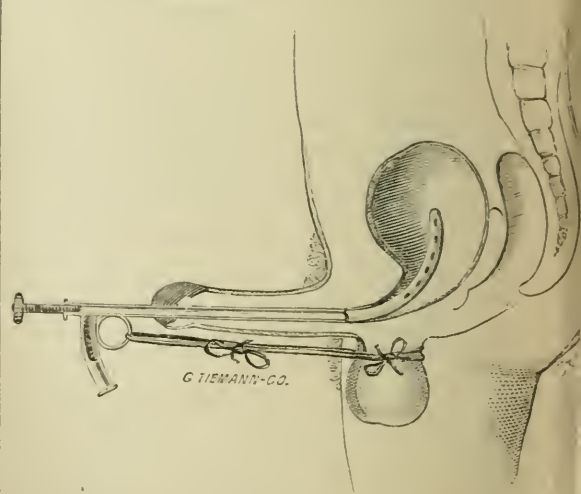
the ulcer. On thinking over some means which might be adopted to enable me to make applications to the part, my eye rested upon a wire upon my office table. The thought at once occurred to me, that I might employ this in some shape to answer my purpose. Twisting it in different forms in the hollow of my partially closed fist, I finally settled upon the form depicted in the present drawing.

To my great satisfaction I introduced it without any trouble, and succeeded in bringing the entire ulcerated surface in full view. I was thus enabled to make applications weekly of chromic acid (with equal parts of water), by means of any ordinary camel's-hair brush. The patient was also treated in the intervals with diluted perchloride of iron, with suppositories of acetate of lead, tannin, and morphine. The patient continued to improve until the ulcer was completely healed.

Finding it to act so well with anal examinations, I had two larger sizes made for the vagina. These, as was expected, acted equally well in this canal, exposing every portion from the margin of the vulva to the os uteri.

The uterine sound can be inserted while the speculum is in place, and the whole canal can be likewise cauterized its entire length and space with the greatest ease. I use the handle in the figure as a Sims speculum with the body of the instrument, B, C, and D, for the handle. The instrument has been already described to the State Society of Texas at its meeting last year. It has the advantages of being cheap, being constructed only of steel wire and nickel plated, and of being extremely light, handy, and portable.

The accompanying cut represents a catheter, the benefits of which I have proved in a number of instances. There is always a difficulty in keeping the catheter in place, at the same time we prevent any injury to the bladder. In these regards the catheter can be said to be entirely unobjectionable. It is simple in its action and perfectly free from danger. It consists, as will be seen, of a catheter with a rectangular outlet, controlled by a screw at the end of the tube. In the angle formed by the outlet is a ring to which is fastened a string, which in its turn is passed behind and around the scrotum. When the bladder contracts, the instrument is pushed out, and the scrotum is pulled forwards. As the bladder fills with urine, the weight of the scrotum keeps the catheter in place. The bladder is easily evacuated when full, by unscrewing the nut at the end.



If it is desired to inject the bladder for cystitis, the nut is entirely removed, and the pipe of syringe is screwed in beyond the discharging-pipe. We can thus

allow the fluid to remain as long as possible, and then by unscrewing the pipe we can allow it to flow out of the proper outlet of catheter. The instrument can be easily used for washing out the bladder, and thus take the place of any ordinary double catheter. I treat all cases of stricture of the urethra, after operation, until the urine runs by its side. I have thus cured twenty-three cases of stricture with one death,—twelve of internal incision, and eleven of external urethrotomy. The one that died had hiccough before he was operated upon, from gangrene in the scrotum and penis. He was delirious, and pulled the instrument out during the night, thus again necessitating the reintroduction of the urethrotome. I have used in this manner the common silver catheter, stopping up the end with a cork or pin, and also the ordinary flexible catheter, bending it in the form of a syphon.

I have been using this mode of confining the catheter since 1858, and have never had any trouble, nor heard any complaint of it from any patient. It prevents to a great extent rigors, the scalding sensation in urinating, and it also prevents infiltration after divulsion or incision. I have not seen any account of its being used in this way by any other surgeon; Gross confines the catheter by attachment to penis; Malgaigne writes six pages on the confinement of catheter to penis and body, all of which are dangerous and difficult to manage.

Correspondence.

DOCTOR WHITEHEAD'S GAG.

To the Editor of the Medical Record.

My dear Sir—Pardon my reluctant appearance in the guise of a newspaper squabbler. I had not intended to notice the letter concerning me in your issue of the 15th inst., and I break silence only by advice of a friend in whose judgment I have every reason to confide.

On returning from a recent summer vacation, I found, among my accumulated correspondence, an unmannerly letter from Dr. Whitehead, the contents of which I will not offend your columns by transcribing. Suffice it to say, it charges me with wilfully claiming an instrument of Dr. Whitehead for my friend Dr. Elsberg. I replied at once, declining to notice the discourteous language of my correspondent, and stating that, if I had made a mistake, I was glad to have it corrected, and would make a public acknowledgment of my error in the Record. Dr. Whitehead's letter, already in your pages, supersedes any further steps towards this end on my part.

When I wrote my book on Diseases of the Throat, I believed, as indeed I still believe, that Dr. Elsberg devised this gag in all its essential points; save only the recent "changed arrangements in the tongue-depressor," which I thought at that time had been devised by Mr. Stohlmann, of Tiemann & Co., but which, I am informed in a recent letter from that firm, were suggested by Dr. Whitehead; and I was furthermore under the impression, and still am under the impression, that Dr. Whitehead actually borrowed from Dr. Elsberg the very identical gag with which he performed his earliest operations or operation with an instrument of this character; and finally, a written inquiry of mine to the instrument-makers, when composing the article, as to whether the gag was Elsberg's or Whitehead's, remained unanswered. Hence I gave Elsberg the credit; but inasmuch as the cuts were furnished by Messrs. Tiemann & Co., from a business circular composed for them by Dr. Whitehead, this source is acknowledged in my list of illustrations.

The only cut I required to elucidate my subject was that showing the gag in position; but the additional cut, with the changed arrangements of the tongue-piece, being also tendered me, I thoughtlessly, and certainly most unnecessarily, inserted it as an additional illustration. This impropriety will not be recommitted should my work reach a second edition.

I am yours truly,

J. Solis Cohen.

Philadelphia, August 26, 1872.

"PESSEMA;" THE NEW SKIN DISEASE.

To the Editor of the Medical Record.

Sir—I have at present under my care a case of skin disease which appears to be identical with that described by Dr. Frisbie, in your No. 157.

Bromide of potassium had, however, not been taken, to the best of my knowledge, and certainly not for three months.

The patient is a female, aged two years and seven months; has a good constitution; resides in a miasmatic locality; was re-vaccinated last winter, had a quite sore arm in consequence; and recovered from an attack of rubeola three months ago. The disease has now existed ten days, and some of the pustules are drying up; others are making their appearance, and many of the latter are aborting.

The description by Dr. F. applied so well to this case, that it is needless for me to enter into details. I have ordered good diet; tinct. cinchon. comp., gtt. x. ter die; ol. olivæ locally, and removal to a healthy country district until frost appears.

Very respectfully,

A. A. Hoehling,
Surgeon U. S. Navy.

U. S. Naval Station, League Island, Pa.

ARMY AND NAVY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 19, 1872, to September 4, 1872, inclusive.

Moore, John, Surgeon.—By S. O. 159, Department of the East, August 21, 1872, granted leave of absence for twenty days.

Alden, C. A., Surgeon.—By S. O. 71, Department of the Lakes, August 5, 1872, relieved from duty at Fort Gratiat, Michigan, and assigned to duty at Fort Porter, N. Y.

Notson, Wm. M., Assistant Surgeon.—By S. O. 73, Department of the Lakes, August 7, 1872, assigned to duty at Fort Mackinac, Michigan.

Tremaine, W. S., Assistant Surgeon.—By S. O. 142, Department of the Missouri, August 29, 1872, granted leave of absence for fifteen days.

Jessop, S. S., Assistant Surgeon.—By S. O. 133, Department of the Missouri, August 17, 1872, assigned to duty with 6th U. S. Cavalry in camp near Fort Hays, Kansas.

Carvallo, C., Assistant Surgeon.—By S. O. 195, War Department, A. G. O., August 22, 1872, to report in person to the Commanding General Department of the Lakes for assignment to duty.

By S. O. 201, War Department, A. G. O., August 29, 1872, the following changes are made:—

Kinsman, J. H., Assistant Surgeon.—Relieved from duty in Department of the South, and to report in person to the Commanding General Department of Dakota for assignment to duty.

Yeomans, A. A., Assistant Surgeon.—Relieved from duty in Department of the Gulf, and to report in person to the Commanding General Department of the East for assignment to duty.

Matthews, W.; Munn, C. E.; Ewen, Clarence; Assistant Surgeons.—Relieved from duty in Department of Dakota, to proceed to New York City, and report, upon arrival there, by letter to the Surgeon General.

Semple, J. E., Assistant Surgeon.—Died during August, 1872, while en route to Department of the Gulf.

Medical Items and News.

Death from Ether.—A death has occurred at Bellevue Hospital, the result of the inhalation of ether. The case will be reported in full in our next issue.

University of Zurich.—The Professors of this University are unanimously opposed to the admission of further female students, and they intend to apply to the Federal Government of Switzerland for a bill restricting the rights of studentship to males.

Paris.—This city has a population of 1,794,380, a loss of 5,690 since the census of 1866.

Amherst College Professors.—Professors Julius H. Seelye and Edward Hitchcock, M.D., of this college, left in July last for San Francisco, Cal., en route for their voyage around the world.

Troy Hospital, N. Y.—This new and beautiful hospital on 8th street, overlooking the City of Troy, adjoining the Roman Catholic Theological Seminary, is nearly completed. When finished it will accommodate two hundred patients; at the present time there are about fifty patients within its walls. It is supported by the Roman Catholic denomination, and is under the charge of the Sisters of Charity. The Hospital receives medical and surgical cases, and is open to patients of both sexes. *Attending Physicians.*—Drs. William S. Cooper, Thomas B. Heimstreet, and James L. Wentworth; *Attending Surgeon.*—Dr. Leroy McLean; *Attending Physician and Surgeon, Eye and Ear Department.*—Dr. Charles A. Robertson, of Albany.

The Dispensary of this Hospital was organized in 1849, for the gratuitous treatment of outdoor sick and disabled poor.

No city in the United States can surpass Troy in its care of the sick poor. The corporation pays four dollars for every destitute sick patient treated in hospital.

A Munificent Gift.—Mr. Leander J. McCormick, of Chicago, of the firm of C. H. McCormick & Brother, of reaping-machine celebrity, will present shortly to the Washington and Lee College, of Lexington, Va., a magnificent telescope, which is to be larger than any other in the world. This instrument was ordered in July, 1870, of Clark & Son, of Cambridgeport, Mass., and will soon be finished. It is to be 26-inch aperture.

Syracuse University, N. Y.—Alexander Winchelli, LL.D., late Professor of Geology, Zoology, and Botany in the University of Michigan, has been elected President of the Syracuse Methodist University by the Board of Trustees, in place of Rev. Dr. Peck, recently elected one of the Bishops of the denomination.

A Female Resident Physician.—The resident physician of the Birmingham and Midland Hospital, in England, for Women, is now for the first time a woman.

Cattle Disease in England.—There are 13,000 cases of foot and mouth diseases among the cattle of one county in England.

New York Physicians.—According to the New York *Medical Register* for 1872, there are in New York City, Brooklyn, and vicinity, seventeen hundred and forty-eight practising physicians in good standing, being a gain of one hundred and ninety-five over the year 1871.

Examination of Midwives.—In order to repress some of the dangerous abuses caused by want of examination, and consequently of education, among "monthly nurses," the Obstetrical Society of London has resolved to form a jury from its members, and to deliver certificates to those women who, on examination, shall show themselves to be capable of executing certain obstetrical manipulations, and who shall show that they have had sufficient elementary instruction.

Foreign Appointments and Changes.—Dr. Gerhart, of Jena, has been appointed to fill the chair of Clinical Medicine in Wuerzburg, vacated by Bamberger, who has gone to Vienna; and Dr. O. Liebreich (discoverer of the action of chloral) has been appointed Ordinary Professor of Materia Medica in the University of Berlin. Dr. Brown-Séquard has resigned the Chair of Comparative and Experimental Pathology in connection with the Faculty of Medicine of Paris, and M. Vulpian has applied for the position. The College of Professors of the University of Vienna have determined on adding a third teacher of Clinical Midwifery to the two already existing, and have appointed to the new post Dr. Gustav Braun, Professor of Midwifery in the Joseph's Academy. Mr. Hancock, for many years Surgeon to Charing Cross Hospital, has been appointed to the Presidential Chair of the Royal College of Surgeons.

Dr. P. A. Simpson has been elected Professor of Medical Jurisprudence in the University of Glasgow.

Physician of Kings Co., L. I.—A. Warner Shephard, M.D., of Brooklyn, L. I., has been reappointed County Physician of Kings County for the term of three years.

Improper Subjects for Lunatic Asylums.—According to Dr. R. W. Parsons (*Journ. Psychological Medicine*, July, 1872), since the year 1847 no less than one hundred and twenty-five persons who have been committed to the New York City Lunatic Asylum as insane, have been discharged as improper subjects. During a single year forty persons have been discharged from American asylums as having been *not insane* at the time of admission.

Spectrum Analysis.—Interesting communications on this popular subject, by Charles K. Mills, M.D., of Philadelphia, previously read before the Northern Medical Association of Philadelphia, are now being published in the *Medical and Surgical Reporter.*

Sandwich Islands.—In 1870 and 1871, 7,321 native Hawaiians died, while the births were only 4,972. The native islanders are rapidly passing away.

THE "TOWN FEVER" OF SAN FRANCISCO, CAL.—Dr. Campbell Shorb, San Francisco, Cal. (*The Western Lancet*, June, '72), after alluding to the topographical resemblance of Rome, "The Eternal City," to San Francisco, describes a prevailing malignant remittent fever, called the "Town Fever," which, in its origin and nature, is identical with the "Roman Fever" of present or remote times. He believes this fever would surpass the latter in violence and malignancy but for the wind which blows in from the ocean, carrying with it saline matter in such a subtle state of subdivision—a species of dry solution—whose tendency is to carry away, dilute, or purify the poisonous exhalations which are generated in many portions of San Francisco. He asks for the adoption of such public measures as will relieve the city from the poisonous exhalations which defective sewerage allows to be generated and carried by the winds to every portion of the town. Then, and not till then, "may our thoughts be directed to the embellishment of our city."

DECAYING VEGETABLES.—The Boston City Council have passed an ordinance requiring market-men not to bring into the city any vegetables unless divested of unnecessary portions, such as leaves, etc., the intention being to prevent the accumulation of decaying vegetable refuse in the neighborhood of the markets.

DAY NURSERIES FOR THE POOR.—Some good ladies of Hartford have opened a nursery where working people may deposit their children and have them properly cared for during working hours. The charge is five cents per head.

THE ARCHIVES DE PHYSIOLOGIE NORMALE ET PATHOLOGIQUE for July, contains the first part of a paper by S. Arloing and Léon Tripier on the Physiology of the Pneumogastric Nerves; part second of the article by Louis Ranvier, on the Histology and Physiology of the Nerves; the second part of the paper by Drs. Mathieu and Urbain, on the Gases of the Blood; the continuation of a paper by M. J. Parrot on a Case of Pseudo-Paralysis caused by Alterations in the Osseous System of a newly-born Child; Experimental Researches on the Formation of a Clot in the Vessels, by F. Durante; and Observations relating to the History of Elephantiasis and Lymphatic Œdema, by M. J. Renaut; A Case of Symmetrical Sclerosis of the Lateral Columns of the Cord and of the Anterior Pyramids—Atrophy of the Cells of the Anterior Cornuæ—Progressive Muscular Atrophy—Glosso-Laryngeal Paralysis, by M. Gambault, etc.

ASTLEY COOPER PRIZE.—The author of the best essay or treatise on "Injuries and Diseases of the Spinal Cord" will be awarded the next Triennial Astley Cooper Prize of £300. All papers must be sent to Guy's Hospital before Jan. 1st, 1874.

FIBROUS TUMOR OF THE BASE OF THE TONGUE.—A case of this character, similar to the one reported by Dr. J. H. Pooley, of Yonkers, in the April, 1872, number of the *American Journal of Med. Sciences*, is published by J. F. Fitts, M.D., of Francestown, N. H., in the July number of the same journal. Dr. Pooley spoke of the tumor in his case as unique, especially as regards situation.

CASES OF OVARIOTOMY.—Dr. Washington L. Atlee, of Phila. (*American Journal Med. Sciences*, July, 1872), publishes five more cases of ovariotomy. He has reported altogether 236 cases.

ACCIDENTAL IRIDEREMIA.—Dr. Julian J. Chisolm, of Baltimore, Md. (*American Journal Med. Sciences*, July, 1872), records a case of complete removal of the iris by the finger-nail of an antagonist, without any injury to the sight.

GUY'S HOSPITAL, LONDON.—J. C. Steel, M.D. (Guy's Hospital Reports, 3d Series, Vol. XVII.), states that 81,771 patients were treated at this hospital during the year 1870; of whom 5,123 were in the hospital wards, and 76,648 were out-patients. The daily sick population was 486. The death-rate for the year was 1,076. Of the 5,123 patients treated in the wards, 1,673 were cured; 2,507 relieved; 396 unrelieved; and 498 died. There were 7,312 cases of death from pyæmia during seventeen years, from the year 1854 to 1871 inclusive. Cases of *pyæmia after surgical operations*, as follows:—

After amputation of limbs for compound fracture and laceration	56
" " of limbs for disease, excluding injury	37
" other operations for injury	3
" operations for disease, excluding amputations	30
	126

Pyæmia without surgical operation:—

After compound fracture of limbs	29
" other external injuries	30
Consequent on disease	109
Apparently idiopathic	18
	186
Total	312

OBLITERATION OF THE CERVIX UTERI.—To corroborate and test the accuracy of the views of Prof. Isaac E. Taylor, of New York, with reference to the obliteration of the cervix uteri during pregnancy, and the doctrine that "it remains intact up to the full term of pregnancy," Dr. Samuel C. Busey, of Washington, D. C. (*American Journal Obstetrics*), submits three cases which came under his observation.

ELECTRICITY IN THE DISEASES OF CHILDREN.—The prize essay, by Dr. Ullersberger, of Paris, France, on "The Use of Electricity in the Treatment of the Diseases of Children," to which was awarded the prize of $100, in gold, offered by Dr. B. F. Dawson, is published in the May number of the *American Journal of Obstetrics*. Allen McLean Hamilton, M.D., of New York, is the translator.

THE CENSUS.—NOT ENOUGH GIRLS TO GO ROUND.—It is reported that the complete census returns of the United States for 1870 give us these startling statistics of our population:—

Men and boys	19,493,665
Women and girls	19,064,806
Surplus of men and boys	428,859

A surplus of 428,859 men and boys is something really startling, when it is considered that Adam and Eve, one man and one woman, is the law of the creation. But as in the chapter of accidents there are more fatalities among boys than girls, and more widows than widowers, and more old maids than old bachelors, our surplus of men and boys is in the infantile, and not in the adult population. "So time at last makes all things even."

ENGLISH STATISTICS.—During the week ending August 1st, 4,755 births and 3,652 deaths were registered in London and twenty other large cities and towns of the United Kingdom. The mortality from all causes

in these towns was at the rate of 26 deaths annually to every 1,000 persons estimated to be living. In Edinburgh the annual rate of mortality was 20 per 1,000 persons living, in Glasgow 27 per 1,000, and in Dublin 23.

Statistics of the State of New York.—The total number of persons of all ages in this State shown by the census to be engaged in gainful occupations is 1,491,018. The total population is 4,382,759. Of these 1,491,018 there are between the ages of ten and fifteen 29,661 males, and 14,927 females; between sixteen and fifty-nine, 1,026,865 males, and 237,282 females; sixty and over, 77,453 males, and 4,830 females. Of the whole number there were born in the United States, 935,098; Germany, 159,683; Ireland, 264,858; England and Wales, 55,168; France, 14,704; British America, 31,915; China and Japan, 102. There are 5,678 clergymen, 931 journalists, 6,810 physicians and surgeons, 20,598 teachers, 5,913 lawyers. There are of all ages 257,039 women and girls engaged in gainful occupations.

State Lunatic Asylum, Utica, N. Y.—The Twenty-ninth Annual Report of the Managers of this Institution, for the year ending November 30, 1871, presents the following particulars:—

	Men.	Women.	Total.
No. of patients at the commencement of the year	313	330	643
Received during the year	272	244	516
Whole number treated	585	574	1,159
Daily average under treatment			605⅛
Discharged recovered	78	90	168
" improved	46	39	85
" unimproved	101	144	245
" not insane	12	5	17
Died	37	24	61
Whole number discharged	274	302	576
Remaining, Nov. 30, 1871	311	272	583

The admissions were within a fraction of an average of ten persons each week, and a large number were chronic cases. Thirty-six were between 60 and 70 years of age; seven were between 70 and 80, and one over 80. Of those unimproved, 12 men and 98 women were transferred to the Willard Asylum. The percentage of recoveries during the year was 32.57. The whole number of patients admitted to the asylum since its opening for their reception is 10,222, of which 3,893 recovered, and 1,564 were discharged improved; and 1,274 died; showing an average of recovered and improved of more than one-half.

Of 516 admissions, 5 had received a collegiate, 35 an academic, and 390 a common school education; 12 could read and write, 30 could read only, 43 had no education. Of these 143 men and 126 women were married, 116 men and 96 women were single, and 13 men and 22 women were widowed.

The form of mental disorder in 516 cases was as follows:—

	Men.	Women.	Total.
Melancholia	44	72	116
Acute mania	47	58	105
Sub-acute mania	29	13	42
Chronic mania	34	43	77
Periodic mania	3	3	6
Dementia	69	42	111
General paresis	27	4	31
Epilepsy	11	4	15
Not insane	272	244	516

Some of the occupations of those admitted were: Housekeepers, 155; farmers, 83; laborers, 43; housework, 42; physicians, 2; lawyers, 2; clergymen, 1.

Since the date of the last report, the Managers have been informed of the death of Dr. N. D. Benedict, who succeeded the late Dr. Brigham as superintendent of the Asylum. He died in April, 1871, in Florida, where he had spent the latter part of his useful life.

Resident officers.—John P. Gray, M.D., *Superintendent and Physician;* Judson B. Andrews, M.D., *First Assistant Physician;* Walter Kempster, M.D., *Second Assistant Physician;* Daniel H. Kitchen, M.D., *Third Assistant Physician;* Edward R. Hun, M.D., *Special Pathologist.*

Tea Drunk in England.—In 1871 England consumed a hundred and twenty-three million pounds of tea.

Insanity.—Drs. Bucknell and Tuke (*Elements of Psychological Medicine*) found that in 10,000 insane patients there is a percentage of 28.87 of ministers and clergymen; that, in 612 cases due to moral causes, 65 were deranged by religion. It was also found, as a moral cause, religious excitement ranked second, domestic difficulties heading the list.

The statistics of the Irish census for 1851 advance the fact that religious excitement made 55 patients insane; and Dr. Webster, in his statistics, reports that in 1,720 cases treated at the Bethlehem Hospital, of theomania 29 were men and 50 women.—*Journ. Psychological Medicine.*

Rare Obstetrical Case.—W. H. Winslow, M.D., of Phila. (*Phila. Med. Times*, July 15, '72), records a case of double pregnancy, with one sac and the following abnormal insertion of the funis of the imperfectly formed dead fœtus. Within three inches of its proximal end it was divided into three branches or vessels, each surrounded by a gelatinous coat; and then, *entirely distinct*, they passed along and pierced the inner layer of the amnion two and a quarter inches from the placental edge; dividing into several branches, which ramified between the membranous layers and finally entered the placenta, being distributed to the one-third segment of the placenta previously mentioned. This, to his mind, was conclusive in regard to a junction having taken place between two separate membranes at a very early stage of gestation. The patient was a multipara, aged 24 years, and was delivered of a congested, imperfectly shaped fœtus, and another well formed and healthy in appearance, and, from the dimensions and development of both, he judged them to have had an intra-uterine existence of three months or more.

Changes in the Medical Colleges of Louisiana.—Professor T. G. Richardson has been transferred from the Chair of Anatomy in the University of Louisiana to that of Surgery in the same institution, made vacant by the retirement of Professor Stone; the Chair of Anatomy is filled by Professor Samuel Logan, late of the New Orleans School of Medicine.

Sequestration of Alleged Lunatics.—R. W. Parsons, M.D., Superintendent of the New York City Lunatic Asylum (*Journ. Psychological Medicine*, July, 1872), in an able paper on "Suggestions Relative to the Sequestration of Alleged Lunatics," says that in the legal investigation of cases of lunacy, the most rational and effective mode would seem to be the appointment of men who have the confidence of the medical and legal professions, and of the community at large, and who are thoroughly informed on the subject of insanity, both in its medical and its legal aspects, as a court of inquiry in

all cases of lunacy that are to be submitted to the civil or criminal courts, and that this court or commission in lunacy be, in its peculiar province, clothed with all the powers and privileges possessed by other courts.

The author further states: The design of this paper was simply to suggest certain improvements in the methods of examining alleged lunatics and of placing them in asylums for the insane, to the end that mistakes in diagnosis may be avoided, and also that medical superintendents of asylums may be promptly advised of facts that are of great value both in a scientific point of view and as aids in devising the early and rational treatment of their patients.

Adipocere.—In the *Boston Medical and Surgical Journal*, of July, 1872, Dr. Benj. H. Tripp, Bowd., mentions a remarkable case of this rare occurrence. As most commonly found, it is the product of a spontaneous conversion of dead animal tissue into a saponaceous or fat-like substance resembling spermaceti. Eighty-three years ago Fourcroy, who may be regarded as the scientific discoverer of this peculiar substance, read the first memoir on the subject before the Royal Academy of Sciences.

Immigration.—The Thirty-second General Report of the Emigration Commissioners (English), recently published, shows that during the past year a total of 252,435 persons emigrated from the shores of the United Kingdom. As heretofore, by far the largest part (231,514) came to the United States; 223,111 of this number being by steamships, the balance in sailing vessels; the deaths on board the former, taking the voyages at an average of twelve days, being equal to a mortality of 15.11 per 1,000 *per annum*. The excess in males of the proportion of the two sexes which emigrated is quite marked; 1,279,240 being of this sex, and 848,999 females.

The Cultivation of Cinchona in India has proved a success; 53,353 pounds of the fresh bark having been supplied by the government plantation at Ootacamund during the past year.

Connecticut General Hospital for the Insane.—This Institution, situated at Middletown, Ct., presents a favorable Report of its workings, and has within its walls 262 patients. At the opening of the year there were 237 patients. The daily average during the year was 242.64; recovered, 17; improved, 11; unimproved, 24; died, 15. In the Pathologist's Report, an important case of general paresis of the insane is detailed. In regard to the "Cottage System," this plan was resorted to as a temporary measure for 30 poor insane persons until the permanent wings of the Hospital could be erected. The Superintendent remarks that sufficient time has elapsed to convince him, that under more favorable circumstances, this "System" can be made to play an important part in connection with a regularly organized Hospital. The "System," he believes, can be applied only to a limited number. A few cottages substantially constructed of brick or stone would be a desirable addition to his present methods of caring for the insane. With this arrangement the Superintendent would, from day to day, transfer to the cottages such patients as he found in condition to require fewer restraints upon their personal liberty.

Its medical officers are as follows: *Superintendent and Physician*, Abram Marvin Shew, M.D.; *Assistant Physician*, Winthrop B. Hallock, M.D.; *Pathologist*, E. C. Seguin.

The Work Done by a Human Heart.—The total daily work done by the human heart is equivalent to 124,208 tons lifted one foot. The daily labor of a workman, deduced from long continued observations of various kinds of labor, is found to be equal to 3,540 tons lifted through one foot during the ten hours. This is less than three times the work done by a single heart, beating day and night for twenty-four hours. In a boat race, it is calculated that fifteen foot-pounds of work are performed by each ounce of muscle during each minute of the rowing. No muscular labor that man can undertake is more severe than this; and yet this labor is only three-fourths of that which is exerted day and night during life by each of our hearts. If the heart should expend its entire force in lifting its own weight vertically, it could raise that weight 19,754 feet in an hour. An active pedestrian can climb from Zermatt to the top of Monte Rosa, 9,000 feet, in an hour; or he can lift his own body at the rate of 1,000 feet an hour, which is only one twentieth part the energy of the heart. The heart's energy equals one-third of the total daily force of the muscles of a strong man; it exceeds by one-third the labor of the muscles in a boat race, estimated by equal weights of muscle; and it is twenty times the force of all the muscles used in climbing, and eight times the force of the most powerful engine of the same size yet invented by man.—*Boston Journal of Chemistry.*

The University of Strasbourg, about the organization of which there has been so much discussion, has, at length, had its affairs arranged as follows. An imperial credit of 200,000 thalers will be opened for 1872, to which will be added the usual fees and subscriptions. It is intended that there shall be forty-two ordinary, and twenty extraordinary professors. Among the former appear the names of Waldeyer (Anatomy), Hoppe-Seyler (Physiological Chemistry), Von Recklinghausen (Pathological Anatomy), Schmiedeberg (Materia Medica), Leyden (Medicine), Lücke (Surgery), Gusseron (Midwifery), and others who have a world-wide reputation. It is openly proclaimed that the professors have accepted their, perhaps, not very enviable posts, as a patriotic duty.

Intoxication in France.—M. Bergeron recently presented a lengthy paper to the Academy of Medicine of Paris on the subject of the terrible increase of intoxication in France from the use of distilled liquors. A meeting of the Academy, for the purpose of discussing the paper, was held early in October, and efforts are being made to secure the passage of laws which shall, by the imposition of fines upon those found intoxicated in the streets, and by other means, remedy the present condition of society in this regard.

Opium Production in France.—Since fifty years ago, when the first attempt was made to raise opium in Europe, the cultivation of the poppy in France has increased to the extent that now about 50,000 acres, of the value of four and a half million francs, are devoted to its culture. The value of the annual crop of opium is about two million francs.—*The Pharmaceutical Journal.*

The Origin of Enemata.—Frederigo Kernot, of Naples, in a newly published *Storia della Farmacia*, describes, according to the *Pharmaceutical Journal*, the invention of the enema-apparatus, which he looks upon as an era in pharmacy as important as the discovery of America in the history of human civilization. The glory of the invention of this instrument, so beneficial to suffering mankind, belongs to an Italian, Gatinaria, whose name ought to find a modest place together with Columbus, Galileo, Gioja, and other illustrious and eminent Italians; he was compatriot with Columbus,

and professor at Pavia, where he died in 1490, after having spent several years in the perfection of his instrument. The enema came into use soon after the invention of the apparatus itself. Bonvard, physician to Louis XIII., applied two hundred and twenty enemata to this monarch in the course of six months; in the first years of Louis XIV., it became the fashion of the day; ladies took three or four a day to keep a fresh complexion, and the dandies used as many for a white skin. The medical profession at first hailed the invention with delight, but soon found the application *infra dig.*, and handed it over to the pharmacist, but shameful invectives, sarcasms, and epigrams hurled at those who exercised the humble duty of applying the apparatus, made them at last resign it to barbers and hospitals.—*Br. Med. Journal.*

Vienna Obstetrical Hospital.—In the three different departments of this hospital there are annually from 8,000 to 9,000 deliveries. In Prof. Braun's clinic, during 7¾ years, from 1863 to 1871, among 34,851 births, 363 died of puerperal peritonitis, including all cases operated upon, *i. e.*, 1.04 per cent., or 10 of every 1,000 deliveries; and 111 died of accidental diseases, *i. e.*, 3.4 per cent., or 34 in every 1,000. Total mortality in 7¾ years, 1.36 per cent., or 13.6 in every 1,000. Whereas, in two former decades, from 1830 to 1849, among 59,098 deliveries, 4,583 women died, *i. e.*, 7.75 per cent., or 77.5 in every 1,000. It follows that 63.9 less in every 1,000 die now than in former years.

Talmudic Gleanings.—In the December number of *The Scattered Nation*—a journal devoted to the reformation of the Jewish race—are a number of "Talmudic Gleanings," from which the following are extracted. Their biting character serves to show the priestly race of yore in strong antagonism to our art:—

"14. A doctor that heals for nothing, his cure is worth nothing.—*Bava Kama*, fol. 85, 1.

"15. Most donkey-drivers are wicked, most camel-drivers are worthy, most sailors are pious, but the best of doctors are for hell.—*Kedushin*, fol. 82, 1.—Note.—A doctor, says a certain writer, has the advantage over the Angel of Death. The latter kills gratis, but the former is paid for it.

"16. Seven have no portion in the world to come—the legal writer, the scribe, the best of doctors, etc.—*Aroth Drh. Mathan*, c. 36.

"17. When a patient says, I am in need of (certain food), and the doctor says he is not in need of it, the patient is rather to be listened to; for (Prov. xiv. 10) the heart knoweth its own bitterness.—*Yana*, fol. 83, a. c. 1.

"18. If there be no Israelitish doctor in a city, but there are in it a Samaritan doctor and a Gentile doctor, the latter may circumcise (a Jewish child), but not the former.—*Avoda Zarah*, fol. 26, c. 2."

A Skilful Woman in Medicine in the Olden Time.—According to Cotton Mather, Roxbury, Mass., in the year 1633, had a competent female practitioner in the person of Anne, the good wife of Rev. John Eliot, the Apostle of the Red Indians. Says Mather, the historian: "His wife was exceedingly skilful in medicine and in dealing with wounds, no small benefit in a recent colony scant of doctors, and she gave her aid freely to all who stood in need of help. A person who had taken offence at something in one of his sermons, and had abused him passionately, both in speech and in writing, chanced to wound himself severely, whereupon he at once sent his wife to act as surgeon; and when the man, having recovered, came to return thanks and presents, he would accept nothing, but detained him to a friendly meal," and, states Mather, "by this carriage he mollified and conquered the stomach of his reviler."—*Pioneers and Founders.*

Small-Pox in the Uterus.—Traces of variolous eruption have been discovered in fœtal life at four months, which is the earliest period on record.

Preparation of Koumiss.—Dr. Townsend, of Cork, gives the following formula for the preparation of this drink, which is said to produce such favorable results in the treatment of phthisis. Take one quart of new milk, one noggin of good thick milk, or fresh buttermilk, and three or four lumps of white sugar. Mix all together from jug to jug till the sugar is quite dissolved. Put it in a warm place to stand for ten hours, by which time it will be quite thick. Pour it again from jug to jug until it is quite smooth. Bottle it in soda-water bottles, and allow it to remain in a warm place for thirty-six hours (twenty-four in summer). Use the best velvet corks; tie them down; shake the bottle well for five or six minutes before it is opened. It will have whey at the bottom when it is fit for use. It should be made every day and taken in quantities. Its fermentation is the test of its excellence.

M. Legrand du Saulle, physician at the Bicêtre, and the Depôt of the Prefecture of Paris, says the number of lunatics brought to the Depôt in the summer of 1871 was much below the average. A writer in the *Gazette Médicale* explains this by saying, that, during the Commune, people could hardly diagnosticate a lunatic from a "Red;" and after the collapse of the revolution the Chassepot proved a most effective, though a deplorable remedy.

The New Sydenham Society have purchased the copyright of Dr. Mayne's Dictionary of medico-scientific terms, which is to be made a basis for a new work of this description. A small staff of editors will be appointed to undertake the task of revision and supplement, and the profession at large is invited to co-operate in furnishing suggestions, emendations, or additions toward the completion of the work.

Manhattan Eye and Ear Hospital, N. Y.—According to the Second Annual Report, 3,675 patients have been treated since the Hospital was opened in 1869; of whom 2,669 were suffering from diseases of the eye, and 870 from diseases of the ear—136 cases not diagnosticated. During the same period, 723 operations were performed upon the eye, and 43 upon the ear.

During the last year, 1,442 cases of diseases of the eye were treated; and 440 of the ear. Number of surgical operations, 472. The medical officers are: Drs. Agnew, Loring, Roosa, Pomeroy, Sturgis, Pardee, Bull, Curtis, and Webster.

New Publications.

Books Received.

Our Lord's Miracles of Healing. Considered in relation to some Modern Objections and to Medical Science. By T. W. Belcher, M.D., M.A., Master in Surgery, Trinity College, Dublin, &c., &c. With preface by the Most Reverend Richard Chenevix Trench, D.D., Lord Archbishop of Dublin. London: James Parker & Co. 1872.

On the Functional Diseases of the Renal, Urinary, and Reproductive Organs, &c. By D. Campbell Black, M.D., L.R.C.S., Edin. Phila.: Lindsay & Blakiston. 1872.

Original Communications.

URETHRAL FEVER FROM CATHETERISM—ITS NATURE AND TREATMENT.

By J. W. S. GOULEY, M.D.,

SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

When an instrument is introduced into the urethra, for the purpose of exploring the bladder, for drawing off the urine, or for dilating a stricture more or less grave, local and constitutional accidents sometimes supervene, and such casualties are most frequently the result of violence: but occasionally cautious, gentle, and successful catheterism is followed by alarming symptoms and even by death.

These constitutional manifestations are: 1st, Rigors with febrile reaction, sometimes followed by suppression of urine, and spoken of under the generic term of urethral or urinary fever.* 2d, Pyæmia.

It is a well-established fact that urinary or urethral fever arising from violence to the urethra or bladder is "due to shock propagated by the sympathetic nervous system and reacting upon the blood vascular system," and that there is some analogy between this ailment and malarial fever; hence the additional title of *intermittent* urethral fever. Urinary fever may be ushered in by a very slight rigor, or even only by a sense of formication or of horripilation, followed by little if any febrile reaction, or the attack may be of the most violent, overwhelming, fulminating character, similar to congestive remittent fever of the severest type, and may cause death in an extremely short space of time. Mr. Banks relates the case of a man between forty and fifty years of age, apparently much broken down in health, who was treated at the Liverpool Royal Infirmary for urethral stricture. There was a false passage in the urethra, and the first catheterism failed, but the second was successful (No. 6 or 7 catheter), and, though difficult, "no undue violence was used and very little pain was complained of; there was no bleeding, and nothing to indicate that there was any lesion of the urethra, except the pre-existing false passage, but almost immediately after the entrance of the catheter into the bladder the man was seized with a severe rigor. The instrument was at once cautiously withdrawn, but the patient passed into a state of profound syncope, and in a few minutes died." No autopsy could be obtained, but the existence of a flabby heart was strongly suspected.† Mr. Banks also gives the account of a typical case of urethral fever, from catheterism, proving fatal in six and a half hours after the passage of the instrument. In this case, the stricture, which was long and narrow and in the pendulous portion of the uretha, had been gradually dilated to No. 4. On the first day a small probe only could be passed, and was left in for half an hour. On the third or fourth day, Nos. 1 and 2 metallic bougies were tried, but failed, and a fine probe-pointed bougie was passed and left in ten minutes, and two minims of Fleming's tincture of aconite given. The dose of aconite was administered after each catheterism, which was practised every four days. On the next occasion Nos. ½ and 1 were passed through the stricture, and after these a fine catgut bougie, which was left in for an hour. When removed it was found still tightly grasped, and on this and each succeeding occasion a stream of urine followed the withdrawal of the instrument. In this way the urethra was dilated, chiefly by catgut bougies, till the fatal day, when No. 4 metallic bougie was passed through the stricture into the bladder for the first time. It went quite easily, was removed in about ten minutes, and was followed, as usual, by a stream of urine, but no blood came. The customary dose of aconite was given. In about half an hour he vomited his dinner, and soon had a rigor. In two hours he had another rigor, still continued to retch, and had a rapid pulse. Another two-minim dose of Fleming's tincture with brandy and water, but this was soon vomited, and nothing could be kept down afterwards. He then began to complain of pain in the region of the bladder and in the loins, the pulse became quicker and weaker, and in spite of all that could be done the retching continued, and he died, having lost consciousness but a moment before, in six and a half hours after the last catheterism. The autopsy revealed a long stricture commencing at about two inches from the meatus. No injury whatever had been done to the urethra. The organs were all perfectly healthy. No congestion of the lungs. In the bladder was about a tablespoonful of thick, muddy urine. The kidneys were examined with great care. They were slightly congested, and on pressure a thickish, turbid urine escaped from the calices, but beyond this no disease was found.

Similar cases were mentioned by Reybard, Velpeau, and others, but in most instances death has not been so sudden as in the foregoing cases of Mr. Banks; twelve to twenty-four hours, or even more, elasping between the catheterism and the fatal issue. In cases of urinary obstruction with renal complication, unless the precautions to be hereafter indicated be taken, urethral fever is almost certain, at one time or another, to follow the introduction of the catheter. The instrument may have been passed at regular intervals for weeks or months without any very great amount of pain and without giving rise to any discomfort, or it may have been followed on one or two occasions by a mild attack of fever, but finally the same careful catheterism is practised—but *on the wrong day*, perhaps, when the patient's functions are temporarily disordered—and in a few hours he is suddenly and unexpectedly seized with a severe rigor from the effects of which he may never rally. Sir Henry Thompson reports a case in point at page 94 of his treatise on Stricture of the Urethra, third edition, London. He says, "I have seen one case of old standing and narrow stricture, in which death was thus caused within fifty-four hours of the passing of an instrument, the same that had been habitually employed on at least a hundred occasions before; no damage whatever having been inflicted by it upon the urethra, as verified by several careful observers on close post-mortem examination of the parts. Rigors and vomiting commenced about an hour after the catheterism, and not another ounce of urine was secreted from that time until death. The kidneys were congested to an extraordinary degree, and their substance was so soft and friable as to give way under gentle pressure. Very rapid changes had evidently taken place in these organs, but no signs whatever of

* Urinary fever occurs very frequently in cases of urethral, prostatic, and vesical trouble, where no instruments have ever been passed, and is then an indication of the existence at least of renal congestion. But in these instances it is—with the exception of cases of far advanced disease—of a milder type than when it occurs from instrumentation, and is often mistaken for malarial fever. The removal of the cause of vesical trouble or of urethral obstruction soon cures this form of "ague."

† "On certain rapidly Fatal Cases of Urethral Fever after Catheterism." By W. Mitchell Banks, F.R.C.S.E., Lecturer on Anatomy in the Liverpool School of Medicine. *Edinburgh Medical Journal*, June, 1871, p. 1074. The reader is referred to Mr. Banks' excellent article for some very important and interesting particulars regarding this subject.

inflammation existed in any other part of the urinary apparatus."

The grave type of urinary fever is a much dreaded, but now happily comparatively rare, accident of the operations of lithotripsy, lithotomy, internal and external urethrotomy and divulsion, as these operations are not resorted to, in our day, when advanced disease of the kidneys and of the bladder is suspected. In thirty-one operations of external perineal urethrotomy, there occurred but three cases of urethral fever, the attacks being mild in two, but fulminating in one which ended fatally in fifty-six hours.

Between these two extreme types—the very mild and the very severe—there is a form of urethral fever, preceded by headache, malaise, pain in the back, and, in fact, all the premonitory symptoms of an attack of ague, in which the chill may be deferred four, eight, twelve, twenty-four or even forty-eight hours after catheterism or other operation upon the urinary organs. This is, however, amenable to treatment, and recovery may be expected in the great majority of cases. It has long been supposed that the chill is ushered in by the passage of urine upon a denuded surface, but such is not the case, as the rigor often occurs before the first act of micturition, or when—the patient having been repeatedly relieved by the catheter—not a drop of urine has come in contact with the urethral canal. If the contact of the urine with the raw surfaces were the sole, or even the principal cause of this trouble, urinary fever would almost always ensue from lithotomy, internal and external urethrotomy, and divulsion; but facts are against this theory.

Suppression of urine is a common complication of urethral fever, but, though frequently fatal, is not necessarily always so. Mr. Banks, in speaking of the rapidly fatal forms of urethral fever with suppression of urine, says:—"In many cases no urine is secreted from the moment the instrument has been passed to the time of death, and this non-secretion has too often been reported as the primarily fatal cause, without consideration of the fact that it is simply a secondary effect upon the renal organs of the great general shock, and, although without doubt greatly tending to precipitate the fatal event, should by no means be regarded as a primary cause, but only as a complication. This is shown, 1st, by the fact that persons have been known to die so soon after catheterism that the mere non-secretion of urine could have had nothing to do with the fatal issue. . . . . 2d, Even when no urine has been secreted, and time has been given for the non-eliminated urea to act noxiously, the symptoms have not been those of uræmic poisoning."

Among the severe cases that I have observed, several showed symptoms of uræmic poisoning: some have recovered, the majority have died, and the pathological lesions of the kidneys were, intense congestion in some, in others infarction, while in others still—that lingered several days—there was interstitial nephritis in its various stages, to suppuration.

Suppression of urine may be partial or complete; the former is of frequent occurrence, while the latter is rare. The symptoms are, dull pains in the regions of the kidneys, no desire to void urine, some febrile reaction, thirst, sometimes vomiting of green bilious matter having a disagreeable urinous smell. The alvine dejections have the same urinous fetor, and the breath and the cutaneous perspiration are also offensively urinous.

Purulent infection occasionally follows urethral fever, although it usually occurs independently of this ailment; and the irregular chills which are caused by urethral pyæmia, should not be confounded with those of urethral fever.

Treatment of Urethral Fever.—As the existence of renal disease is a strong predisposing cause of urethral fever, it is necessary, in case such disease is even suspected, to institute a preparatory course of treatment for several days before the intended catheterism be attempted; but I go further than this, and prepare all patients—with the exception, of course, of emergent cases—for five or six days before they are placed under mechanical treatment, and consequently now have, in my own practice, but very few cases of urethral fever to treat. The preparatory treatment which I usually resort to is as follows:—After free catharsis, rest should be enjoined for a day or two, a hot hip bath ordered at night, a diluent drink three or four times daily, ten minims of tincture of chloride of iron three times a day, and five grains of quinine every night.

Quinine was first given in free doses for urethral fever by Bricheteau, who, in 1847, reported several cases successfully treated with doses of ten, twelve, and fifteen grains.* More recently, Ricord, who was not at first a believer in the efficacy of quinine in urinary fever, said, at the Surgical Society of Paris, that he had come to the point of never performing any operation upon the urethra without having previously administered quinine, and that ever since he had adopted this preventive treatment, the number of cases of urethral fever, so great before in his hospital service, had almost miraculously diminished. This alkaloid is undoubtedly one of the most effective of the remedial agents given to combat urethral fever, and should be administered in a dose of at least ten grains, with half a grain of opium after each catheterism, and, when necessary, should be increased to fifteen or twenty grains in the twenty-four hours.

Mr. Long speaks highly of two-minim doses of Fleming's tincture of aconite, for preventing rigors in cases where they had occurred after catheterism. † This is, I believe, another excellent remedy, but I would not take it in exchange for quinine. I have lately, however, given it in combination with quinine.

In the very mild cases of urethral fever, a hot drink of any kind, and rest for a few hours, will generally suffice.

When that ominous complication, suppression of urine, occurs, the case should be treated with the greatest caution; and, let me first say, the medical attendant should *beware* of administering stimulating diuretics. After the first catheterism—to positively exclude retention of urine—no instrument of any kind should be passed into the urethra. The next indication is to establish at once a vicarious excretion of the elements of the urine, if Nature in her conservative effort has not already done so. The skin and the intestinal mucous membrane should be made to do duty for the kidneys until the latter are in condition to perform their function. *The hot-air bath* is the most rapid mode of effecting diaphoresis, but as it cannot be given more than once or twice in the twenty-four hours, it is necessary to administer by mouth quarter of a grain doses of ipecac every two or three hours, with hot borage tea, or any other diaphoretic.

Catharsis may be procured and kept up by any of the hydragogues; but small doses of sulphate of soda and of magnesia, in hot water, often repeated, will fulfil the object very well, without weakening the patient. Hop fomentations should be constantly applied during the day to the lumbar and hypogastric regions, and the loins should be freely dry cupped. Then a teaspoonful

* Des Fiévres Intermittentes Pernicieuses chez les viellards. *Archives Générales de Médecine*, 1847.

(†) *Liverpool Medico-Chirurgical Journal*, January, 1858.

of the infusion of digitalis * should be given every hour or two hours, and the effect on the circulation closely watched.

The whole cutaneous surface, which exhales sometimes such an offensively urinous odor, should be thoroughly dried and rubbed with a warm towel, at least three or four times in the day. The patient should be covered in bed, well nourished with concentrated mixed food, and, if he should become enfeebled by too profuse diaphoresis, a hot brandy toddy should be administered once or twice a day.

The patient is generally safe, if there be not advanced renal disease, as long as diaphoresis and catharsis can be kept up. Complete suppression of urine may last several days, but when the kidneys do not secrete urine in the course of three or four days, the chances of recovery are decidedly lessened.

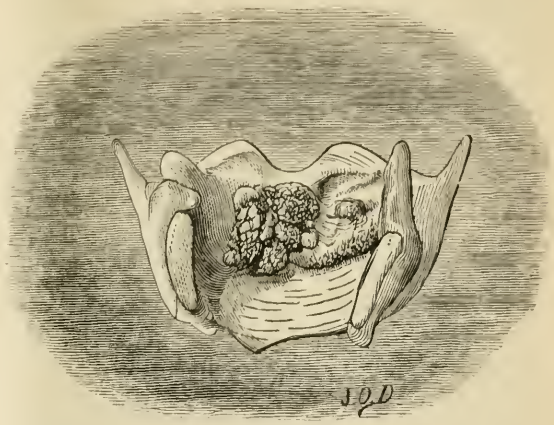
PAPILLOMA OF THE LARYNX.

By PALUEL DE MARMON, M.D.

David Williams, age five years and six months, had whooping-cough when four years old. This disease lasted four or five months, and was followed with hoarseness, which itself degenerated into aphonia; so much so that for the last six or eight months this child's voice could hardly be heard. A member of the infinitesimal school was consulted about four months ago and said that the patient would outgrow the disease. Such was the faith of the parents for the science of that schismatic practitioner that they never consulted any one else, and that when the child died, *January* 18, 1872, the coroner had to hold an inquest, death occurring from asphyxia before they had any time to send for a physician. I made a post-mortem examination of the body, and the following illustration shows the result of the autopsy. It is that of a disease which, before 1859, when Czermak published his first case, observed *de visu* upon the living subject by means of the laryngoscope, was considered as a very scarce one, and had been so far observed only post-mortem; but which now, owing to the certain means of investigation, proves to be more frequent; although it is seen only two or three times, according to *Krishaber*, and only once or twice (*Morel Mackenzie*) in one hundred cases of exclusively local and chronic affections of the larynx.

The specimen exhibits the thyroid cartilage, and is open so as to show its internal anterior fascia, covered with a papilliform fibroid or papilloma. It illustrates one of the varieties of fibromas or fibrous polypi as found in the larynx, and is by some authors considered as one of the most frequent forms, being as one-half compared with the other forms. If carefully examined it may be observed that it is composed of several sessile masses connected together, and which are more or less developed. On the left side of the largest tumor may be seen a little one of a recent formation; it is about the size of the head of a large pin, and has the appearance of a small wart. It is not papilliform as the others, but round; it looks like a pediculated fibroma without its pedicle; but if examined with a magnifying glass it proves to be of the same formation as its congeners, only that it is less developed.

The body of the child was rather emaciated, and the internal organs healthy, all but the appearance of the lungs, as they are found in all cases of pulmonary apoplexy. There were a *half-dozen warts upon the back of the hands.*



Father and mother both healthy and of sober habits; and from inquiries made as to their respective families, no foundation could be laid as to any hereditary diathesis or taint whatever. There are two other children in the family, and both are also very healthy.

This disease has been so well described in all its forms by Czermak, Wedl, Türk, Causit, Bergeron, Krishaber, M. Mackenzie, and others, that I need not occupy any time in repeating what they have already said.

However, there is a feature about the present case which I think worthy of attention: it is the presence of warts upon the hands of the patient, and the resemblance of these with a papilloma; for if in polypi of the larynx we have the fibrous, papillary, glandular, mucous, or mixed forms, so we have in warts. Now, is there any connection between the two growths in this case, or are they simply accidental. We are inclined to lean towards the first; although this connection has not yet been noticed by authors. The only one we find in which other polypi had been seen on any patient subjected to polypus of the larynx is reported by Causit (*Etudes des polypes du larynx chez les enfants*, 1867), in which a little girl who had already been operated for polypi of the nose had afterwards polypi in the larynx. Some authors have reported these growths to the influence of diathesis, such as phthisis (Trousseau and Belloc, Ehrmann, Andral, Dufour); scrofula (Walker); syphilis (Ehrmann and Czermak). Researches have also been made upon the *particular predispositions* to the formation of vegetation upon the several mucous membranes of the body, but without any observation in regard to papilloma.

Kingsbridge, N. Y., June, 1872.

DEATH FROM ETHER.

By W. B. DUNNING, M.D.,

Acting House Surgeon, Bellevue Hospital.

John Stockander, a German saddler, unmarried, 68 years old, was admitted to Ward 13 of Bellevue Hospital on August 2, 1872, suffering from a fracture of left femur, just below the trochanter. The patient was treated by a Buck's Extension until August 20, when it was decided to apply a plaster of Paris splint. In order to make sufficient extension, and at the same time prevent the pain of the operation, ether was or-

* The infusion should be used in preference to the tincture or the extract of digitalis, as it is known to be more effective as a diuretic than either of the latter.

dered to be administered. The administration of the anæsthetic was slowly and carefully made, and after perhaps ten minutes the patient was fully under its influence and the operation begun. A few turns of the plaster had been made, when the patient's breathing was observed to be rather frequent and gasping. The pulse was, however, full and regular. The thorax was compressed two or three times, and the patient's breathing again became normal. As these symptoms not rarely occur during etherization, they excited no special alarm. The ether was, however, withheld from the patient four or five minutes, his respiration and pulse being normal. As he then began, however, to move about and his muscles were becoming rigid, the ether cone was again applied. In a minute or two, my assistant, who was giving the ether, observed the pupils to be dilating rapidly and the breathing to cease. His heart was still beating, however. The ether cone was of course immediately removed and artificial respiration was again used, and all the batteries obtainable in the hospital were put in operation in an effort to resuscitate the patient. His muscles occasionally responded by a spasmodic movement, but no breathing again occurred. The efforts at resuscitation were continued about forty minutes, until all response to the action of the battery had ceased.

Patient died about four P. M., and the autopsy was made at seven P. M. that same day, under direction of Dr. Delafield. Rigor mortis was marked. Blood was fluid. Brain and membranes neither anæmic nor congested. Trachea and larynx somewhat pale. Heart contained a little fluid blood, with a little atheroma at base of aortic valves. Lungs have old adhesions over both. Emphysema exists, and thickening of large bronchi. The lower lobe of right lung is œdematous, and its lower portion in a state of red hepatization. Rest of lung is normal and not congested. Liver is small and firm, containing a good deal of fluid blood. The other organs are normal.

The ether used was that made by Powers and Weightman. It has been examined by Dr. Squibb, of Brooklyn. He states that he "finds nothing in the character or quality of the ether to account for the death of the man, or even to aid in accounting for it." He adds, that in his "judgment the death of this patient is in no way attributable to either the quality of the ether, the quantity used, or the mode of administration, but that it is one of those accidents which, though of very rare occurrence under the careful use of ether, is inseparable from the condition of anæsthesia."

The quantity of ether used was about ℥ vi.

THE ELECTRO-THERAPEUTICS OF DISEASES OF THE SKIN.

By EDWARD C. MANN, M.D.,

BROOKLYN.

Very little attention has as yet been paid to the treatment of skin diseases by electricity, although, from the constitutional source and central origin of many of them, the best results are to be hoped for. The relation that exists between the sympathetic and vaso-motor nerves, and many cutaneous lesions, is accepted by many dermatologists. The numerous experiments in which electricity and other remedial agents applied to the central nervous system have been efficacious, without the application of any local curative agent, have clearly proved the existence of such a relation. Neumann gives it as his opinion that "there is no doubt but that a large proportion of cutaneous lesions depend upon disorders of the vaso-motor nerves, which cause certain derangements of the circulation in the arteries, veins, and cutaneous glands." We find that diseases of certain organs give rise to, or are accompanied by, certain cutaneous lesions. Thus in diseases of the stomach, especially disturbances of digestion, we often see eczema and urticaria. Upon the application of electricity in such cases, we have invariably found very marked tenderness of the solar plexus, and in proportion as the dyspepsia was relieved, the abnormal sensitiveness to the electrical current has diminished, and the general nutrition has improved, owing to the action of the electricity on the sympathetic nerve. In renal and uterine disorders we often see pruritis, eczema, and urticaria, and the application of both the galvanic and faradic currents to the sympathetic nerve, acting on the solar and hypogastric plexuses, has been found in some cases to relieve the eruption, although in some of these cases the relief was but temporary, as the cutaneous lesion probably depended upon an incurable condition of the kidneys and uterus. In the cutaneous lesions which are the sequelæ of scarlatina, measles, etc., acting on the vaso-motor nerves, the use of electricity which shall affect these nerves is certainly a mode of treatment from which we may reasonably expect good results. In the cases that have presented themselves to our notice, the most prominent symptoms relating to the nervous system have been "neurasthenia," or nervous exhaustion, anæmia, hysteria, neuralgia, and insomnia; and in proportion as the nervous symptoms yielded to treatment, the cutaneous lesions have disappeared. In none of the diseases of the skin do we find a more intimate relation existing between the nervous system and the cutaneous lesion than in herpes. Bärensprung thinks the origin of zoster to be an inflammation of the sympathetic fibre of the small spinal ganglion, which inflammation is communicated to the skin, and explains the neuralgia so frequently accompanying it by the transmission of the irritation and reflex action from the ganglion upon the posterior root. It has also been observed in some cases that inflammation of the entire nerve tract had existed. In the treatment of this disease, central galvanization and galvanization of the sympathetic may open to the profession a means of cure which will perhaps be of some service. For the benefit of those who are not acquainted with the practical application of electricity, we may explain that "central galvanization" signifies the most direct method of influencing the great nervous centres by the following method. Apply one pole, generally the negative, to the superior part of the epigastric region, so as to affect directly the solar plexus, and the positive pole to the crown of the head, or cranial centre, which is a very important point for affecting the brain; and also over the sixth and seventh cervical vertebræ, or cilio-spinal centre, at which point, by moving the electrode on either side of the spine, we affect the cervical sympathetic nerve, and also the pneumogastric, phrenic, and laryngeal nerves, and brachial plexuses. This point is the most important region of the body in the application of electricity, as we can influence more important nerve tracts than at any other place. In conclusion, the positive electrode may be passed down the entire length of the spine, from the first cervical to the second lumbar vertebra, or cauda equina, at which latter point the sciatic nerves and their branches are strongly affected.

In many cases of prurigo we have traced the cause to the central nervous system, and Cazenave and Romberg both consider it a neurotic disease. In one case that came under our notice, that was relieved by the

use of central galvanization, there was intense itching, but no complaint was made of any neuralgic pains, which was contrary to the rule laid down by German authorities, that if the prurigo is neurotic in origin, neuralgia, and not itching, will be present.

The case referred to followed a severe attack of scarlatina. In another case, which came on after long-continued mental excitement, both slight neuralgic pains, wandering in character, and severe itching existed. While our knowledge of the therapeutic uses of central galvanization is still in its infancy, extensive observations have been made, and cases have been reported by eminent authority upon skin diseases, in which local galvanization has accomplished the best results in many cutaneous lesions. Conspicuous amongst these is the cure by local galvanization, by Dr. Henry G. Piffard, of New York, of a case of scleroderma, which is the more interesting and valuable, as there are but about forty cases of this disease on record, and but very few other reports of cure. Neumann, in his "Handbook of Skin Diseases," page 296, reports an interesting case of scleroderma in the clinic of Dr. F. Fieber, which resisted all ordinary local treatment. This case was treated finally by local galvanization and cured.

That eczema may be ranked in many cases with the neuroses, and cured by central galvanization, is, we think, demonstrated by the following interesting cases.

Case 1, Miss O'C. :—Eczema following intermittent fever. About eighteen months since, had an attack of intermittent fever. Has had four succeeding attacks, which reduced her health very much, leaving her very weak and anæmic. A short time after the last attack the legs began to swell, the swelling being accompanied with erythematous redness and vesicular eruption, discharging a watery exudation, which formed yellowish crusts. This eruption was accompanied by burning pain and a great deal of itching. The hands were swollen. The eruption also appeared upon the head and back. Four séances of central galvanization completely cured her, the length of the applications being about fifteen minutes, and being made twice a week. Has at the present time a good appetite, and is gaining flesh. No sign of the eruption.

Case 2. Chronic eczema of four years standing, Mr. D. Four years ago, the eruption appeared on legs. Grew steadily worse under local treatment, the eruption extending up the legs, and to the back and arms. The use of arsenic caused the eruption to disappear for the period of eight months, at the end of which time it reappeared, and has since been confined to the legs and ankles, with a little on the hands. Intense itching was complained of. Three séances of central galvanization caused the itching to stop entirely, and at the last application the eruption was nearly all gone.

Case 3. Chronic eczema of two years standing, Miss D. E. B., 27 years old. Has been suffering for two years from a painful eczematous eruption, which was located on the palms of the hands and the soles of the feet, and on the right elbow. She complained of considerable pain in the left leg and ankle. Had sore throat some time ago. Her hair fell out in large quantities two years ago. Reported that she had been treated for syphilis. Six séances of central galvanization resulted in the disappearance of the eruption. Can now walk any distance.

Marked relief has also followed the use of general faradization in two cases of skin disease which seemed to depend upon uterine disorders, which greatly reduced the general health, and impaired the digestive functions. One of these cases occurred in a lady of about thirty-five years of age. A severe pruritus had existed for some months, associated with dyspepsia. A few applications of general faradization restored the appetite, and cured the dyspepsia and pruritus. After some time, however, the dyspepsia reappeared, accompanied with a slight degree of pruritus, and it was not until the uterine trouble, which was prolapsus in the first degree, was cured, that the pruritus entirely disappeared.

The other case referred to occurred in a young lady of twenty, who had suffered from amenorrhœa for some months. She complained of severe recurring attacks of urticaria with dyspepsia and nausea. Three applications of the induced current locally to the uterus and hypogastric region resulted in the reappearance of the menstrual flow, and a few applications of general faradization improved the general health very much, and the urticaria and dyspepsia disappeared. Up to the present time, no complaint has been made of a recurrence of these symptoms. Local applications were made on two succeeding months, and the amenorrhœa yielded very readily to this treatment. In the application of electricity, we consider the apparatus and electrodes made by the Galvano-Faradic Manufacturing Co. as superior to any others, both for practical utility and beauty of finish, and cordially recommend them to the favorable notice of the profession.

POISONED WOUNDS FROM THE BITE OF THE SNAKE AND TARANTULA AND THE STING OF THE SCORPION AND CENTIPEDE.

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While perusing "Emergencies, and How to Treat Them," by Dr. Howe, my attention was directed to chapter VI., which treats upon poisoned wounds. After discussing dissection wounds, and hydrophobia, he refers to snake and tarantula bites, also to the sting of the scorpion and centipede.

Physicians commencing the practice of medicine eagerly adopt remedies recommended by authors: therefore the necessity of correct teaching, or much harm may result. From his remarks it is to be supposed that his personal experience in these "Emergencies" has been limited, and that he has gathered his ideas from books.

There is great difference between theory and practice in the treatment of bites of venomous serpents and insects, and few emergencies require more prompt and active treatment. By the timely administration of efficient remedies the mortality can be much reduced, and if energetic treatment is not pursued the life of the victim may be sacrificed.

While living in the extreme South, I frequently had occasion to treat accidents of this kind, and did not deem it prudent to experiment, but relied upon remedies known to be efficacious.

My chief reliance was upon suction and alkaline dressings; soda or ammonia applied externally, with large draughts of spirituous liquors, whiskey or brandy, internally; or full and repeated doses of olive oil taken into the stomach. These remedies were found to be certain and speedy antidotes. I have never known a person to die from a snake-bite who could be gotten under the influence of liquor, and the success of the internal use of olive oil is equally efficacious.

A domestic remedy was frequently applied before a physician could be summoned; which was to kill a chicken, open it through the back, and apply it warm with its entrails over the wound. Its efficacy was evident by the parts of the fowl coming in contact with the wound in a few minutes turning green by absorbing the poison.

When a fang of the serpent penetrates a blood-vessel and the virus is absorbed directly into the circulation, remedies avail but little, and the person usually lives but a short time; but if such is not the case, the timely administration of appropriate remedies affords relief.

Swine are not impressed by snake-bites, because of the deposit of adipose next the skin, which neutralizes the poison, and besides it is not abundantly supplied with blood-vessels. With lean hogs it is very different. I have frequently noticed a lean hog to avoid a poisonous reptile, while one in good flesh would attack eagerly and devour without fear. The instinct of this brute is such, which seemingly is endowed with but limited reasoning power.

The scorpion sting is never dangerous, though exceedingly painful, even more so than the sting of a bee, but the pain does not last so long. Treatment is unnecessary, though alkalies applied directly relieve.

The tarantula bite is very dangerous and painful. The treatment suggested for snake-bite is appropriate, if resorted to at once. I have never known a fatal case, though extensive sloughing has sometimes taken place.

Dr. Howe remarks: "The stories of its ravages are however not founded upon facts." Could the Dr. have seen some of my cases he would have thought differently.

He again remarks: "Centipedes are less dangerous than either of the preceding varieties."

This is not in accordance with my experience; the mentioning of a case will illustrate.

A gentleman in high social position, while engaged in superintending his garden, drew off his coat and hung it upon a shrub, which by its weight bent it to the ground; a centipede crawled up one sleeve; upon putting on his coat he felt a creeping sensation upon his arm: he squeezed the part and attempted to brush it down, when each poisoned claw made its impress upon the arm, and in consequence he was soon in great agony.

The ordinary domestic remedies were immediately applied before a physician arrived, but in spite of treatment a high grade of inflammation was kindled; suppuration and sloughing took place, destroying the surrounding tissues, which left the arteries pulsating plainly visble and well nigh destroyed the man's life. There eventually was much loss of substance of the affected arm. In the course of three months he was measurably restored to health.

Poultry greedily devour the smaller specimens of the tarantula with impunity, but the virus from its sting is a deadly poison to the human subject.

Fortunately, wounds from the tarantula and centipede seldom occur, but snake-bites are more common where poisonous reptiles abound.

Dr. Tanner remarks, in his "Practice of Medicine," that dengue fever is an accompaniment of scarlet fever. We that have treated dengue fever laugh at this statement, and the trusting to bilious antidotes* in the emergencies of snake-bites seems equally absurd to physicians having much experience in such cases.

* Potassa iodide, gr. iv.
Hydr. bichloridi, gr. ij.
Bromide, ʒ iv.
Dose from 10 to 20 minims every half-hour until relieved.

Progress of Medical Science.

Treatment of Cancrum Oris.—C. S. Kittredge, M.D., of Oakland, Cal. (*The Western Lancet*), late Assistant Physician at the Nursery and Child's Hospital, Randall's Island, N. Y., publishes 19 fatal cases of this formidable affection—which is a malignant form of ulcerative stomatitis—induced in children under five years of age, predisposed to tuberculosis. The duration of this disease is from six to sixteen days, running a most rapid course when commencing in the cheek or throat, but somewhat slower in its progress when commencing in the gums. The disease demands prompt and energetic attention. He commences with the chlorate of potassa, in from five to ten grain doses every four to six hours, and continues it during the whole progress of the disease. The mouth must be frequently washed with a weak solution of liquor sodæ chlorinatæ, ʒ i. to water ʒ xii., and after mortification has commenced, a pledget of soft linen, wet in this solution, should be constantly kept between the sore and the adjacent tissue. Tonics and stimulants should be freely given on account of the great prostration, and iron with bark or quinine in as heavy doses as the child will bear, and strong beef-tea in place of solid food. Out of 67 cases of stomatitis treated during the year, there were 19 deaths, or 28 per cent. Of the fatal cases, 12 were males and 7 females. The average age was 2 years and 11 months. In 16 cases, the primary disease was rubeola. Fourteen autopsies were made; and in every case, tubercles were found in great abundance. In 13 cases the tubercles were in the lungs, and in the other, the mesentery was filled with miliary tubercles. He remarks in conclusion that cancrum oris has a close connection with tuberculosis; and believes that it can exist only in children of a tuberculous diathesis.

Operation for Internal Strangulated Hernia.—Prof. G. Marcacci, of Florence, performed gastrotomy in October last, on a young man for the relief of a hernia caused by excessive vomiting. The protrusion occurred in the right iliac region, about three inches above the crural arch, and eight or ten inches from the pubes. Ten days following the operation the patient was able to walk, and was discharged cured at the end of a month.—*Lo Sperimentale.*

Tracheotomy.—Dr. P. Landi reports a successful case of tracheotomy for the extraction of the first molar tooth, lodged for twenty-four hours in the left bronchus of a child seven years of age; the tooth having escaped from the forceps at the moment of extraction. —*Ibid.*

Kerosene Oil in Chronic Rheumatism.—A New Zealand physician recommends the internal administration of this substance, a teaspoonful taken in a wine-glass full of water every other night having been the form in which it was administered to the case which he reports as cured by it. It is stated that no unpleasant symptoms were produced; no loss of appetite, or effect upon the functions of the bowel or kidneys.

The unpleasant taste has been palliated in some cases by allowing a pinch of salt to dissolve in the mouth before taking the remedy. The following is a synopsis of one of the cases treated:

J. H., aged about 46, a sailor, had suffered from chronic rheumatism for twenty years. Never had an acute attack. Used to have agonizing twinges in his feet and legs, the pain of which he compared to that produced by forcible pinching and pulling of the skin

with tweezers. The attacks would come on about every ten minutes, and often for three or four days and nights. He had been under medical treatment many times, but had never had more than temporary relief. Six weeks after commencing the use of kerosene the intervals between the attacks began to lengthen, and in less than three months the pains had entirely left him. After discontinuing the treatment for some time, the pain slightly returned, but was always promptly arrested by two or three doses of the remedy.

To Remove Tar and Resinous Substances.— Dr. Brickerd (*Med. and Surg. Reporter*) discovered by accident that a mixture of powdered extract of liquorice and oil of anise-seed will quickly and effectually remove tar, Venice turpentine, pitch, etc., from glass, porcelain, and the skin, and is entirely harmless. For the latter purpose the mixture should be about the consistency of thick cream and should be thoroughly applied; being followed by soap, warm soft water, and a sponge.

Test for the Purity of Creosote.—It is said that creosote may be distinguished from carbolic acid (which is sometimes substituted for it), by mixing the suspected sample with pure glycerine; pure creosote is insoluble in this medium, whereas carbolic acid makes a bright solution, and when present in considerable quantity it makes creosote also soluble in the mixture.

Extract of Meat.—Prof. Artus, of Jena (*Wien. Med. Zeit., No.* 3, '72), recommends a new method of making extract of meat, which possesses the advantage of that of Liebig, in retaining the albumen, gelatine, and fat, which are all removed by Liebig's process, and which would seem, from recent experiments, to be the only really nutritious elements of the meat. For this purpose an extract of meat is first made with cold water by means of a very simple apparatus; this dissolves out the soluble salts, the albumen, and part of the gelatine and creatine. The meat, after having undergone this process, is then boiled for an hour in a Papin's digester, and the liquid pressed out. The fat is skimmed off its surface and this extract is mixed with the cold extract, and the mixture is then evaporated to a proper consistence in a sand-bath, or, better, in a vacuum apparatus. This certainly seems a much better way of preparing an extract of meat than any of the methods which necessitate the throwing away of the most valuable of its constituents.—*Br. Med. Jour.*

School Hygiene.—In a report on health, in the *Dublin Journal of Med. Sci.* for May, Dr. Cameron refers to a valuable treatise by Virchow, on the diseases incident to schools. Virchow quotes several eminent authorities, among others, Guillaume, who found among 731 scholars whom he examined no less than 218 with distortion. The great majority of cases of scoliosis were among girls. In 72 cases noticed by Knorr, of Munich, 60 were females. As girls spend less time at school than boys, and fewer girls attend school, it is urged that scoliosis is not most frequently induced by bad postures while studying. To this objection it may be answered that boys, during their hours of play, counteract, by vigorous exercises involving the play of nearly all the muscles of the body, the evil influence of the school-room postures. On the other hand, girls, as a rule, do not practise any kind of gymnastics. Virchow attributes a large proportion of the pulmonary consumption of childhood to overcrowding in school-rooms, to sudden changes of temperature in passing from hot school-rooms into cold outside air, to the dust of the school-room, and, lastly, to impaired respiratory movements induced by long sitting.

The Syphilis-Corpuscles of Lostorfer.—The microscopical committee, appointed from the Boston Society for Medical Observation (*Boston Med. and Surg. Journal*), to investigate the subject of syphilis-corpuscles in the blood, have reported that their conclusions are negative; that the bodies described by Lostorfer as peculiar to syphilitic blood were found in the blood of syphilitic patients and of healthy persons as well; and that the so-called corpuscles appear to have their origin in certain physical or chemical changes to which the blood globules are subjected in the course of prolonged microscopic examination.

An Enormous Draught of Hydrate of Chloral.—A correspondent of the *Boston Medical and Surgical Journal* writes that one of his patients took by mistake 200 grains of hydrate of chloral. When seen, one hour afterwards, the face was of a deathly pallor, and a leaden color was about the lips and under the nails. He was immediately wrapped in warmed blankets. Heat was applied to the extremities; a sinapism over the heart, and an enema of dilute aqua ammonia administered. Rallying took place very slowly but steadily. The only other treatment he received was ice to the head, and small doses of tartar emetic during the reactionary stage, when the pulse ranged as high as 130.

A Fatal Case of Hysteria.—It is but rarely that an opportunity is offered for an examination of the *post-mortem* appearances of the organs of persons who have suffered from this affection, and we therefore transcribe the notes of a case published in the *Brit. Med. Jour.* of July 6th. About three o'clock P.M. of October 11th, 1870, Dr. R. W. Foss, of Stockton-on-Tees, was called to see a young lady, aged 19, who had been having convulsions all day. At the time of the visit she was perfectly conscious, throwing her arms and legs about, laughing and crying alternately, in fact, having hysterical convulsions. She complained of pain in the right side of her head, also of the *globus hystericus* rising up from her abdomen to the right side of her chest, where it stopped. Her chest gave negative physical signs; pulse about 80, and small. She stated that she had been having leucorrhœa with much offensive discharge for the last fourteen months, and within that time had had these hysterical attacks. All of this time she had been under medical care. Her father stated that all the physicians who had seen her had said that she was simply suffering from hysteria with leucorrhœa, and that in time she would be well again. The same opinion was expressed by Dr. Foss, who believed that it was a case for moral more than for medical treatment. Within three hours from Dr. Foss's visit she was dead, and at the desire of her father a *post-mortem* examination was held, with the following results:

The lungs were normal, excepting some hypostatic congestion at their bases, and the presence of some frothy mucus in the bronchial tubes. The heart was pale and rather flabby, the apex of the right ventricle containing a small clot; the other cavities were empty. The liver seemed rather larger than normal, but appeared healthy on section. No disease discovered in the kidneys or supra-renal capsules. The contents of the cranium appeared perfectly natural. The base of the uterus was congested, and its walls were thicker than usual. The mucous membrane lining its interior was covered with a thick, glassy mucus like white of egg, which was also exuding from the os. The left ovary was about the usual size, and, on section, presented a honeycombed appearance, consisting of numerous little cavities filled with gelatinous matter, constituting what is called "colloid tumor of the ovary." The right ovary was the size of a large walnut, and, on section, was

seen to consist of one large parent cyst containing many smaller ones springing from its internal surface. There was nothing here to account for so sudden a death, and the only hypothesis offered was, considering the condition of the heart, that death was caused by syncope.

A nearly similar case is reported to have occurred in 1868 at the Royal Infirmary in Edinburgh, in the person of a strong, well-developed woman between 20 and 30 years of age, in which, on *post-mortem* examination, none of the organs were found to be diseased.

Prediction of Sex in Utero.—T. J. Hutton, M.D., Resident Physician to Long Island College Hospital (*New York Medical Journal*, July, 1872), in substantiating the assertion advanced by Tyler Smith and others, that not only can pregnancy, in its advanced stages, be determined by auscultation, but also the presentation, position, and sex of the fœtus *in utero*,—submits the following essential points from the clinical records of seven cases as a proof of the practicability and reliability of this rule: Fœtal pulsations, heard below a horizontal line, dividing the uterus into two equal parts, denote vertex presentation; above it, breech presentation; below it, and to the right, second position. When the fœtal pulsations number 144 per minute, it is a female; 124 per minute, male. As deviations from this rule, or average, will doubtless be encountered, he ventures to add that a variation of *six beats per minute*, from 124 upward or from 144 downward, will not endanger a diagnosis, provided auscultation be practised in the *ninth month of pregnancy*. In his cases this rule was the sole guide, and without a single failure.

Chloral as a Topical Application in Eczema.—A correspondent of the *Boston Medical and Surgical Journal* states that during the past year he has used in several cases of chronic eczema, with much satisfaction to his patients and himself, a solution of the hydrate of chloral as a topical remedy, in the proportion of one or two drachms to a pint of water, applied two or three times a day.

Excision of the Hip-Joint for Morbus Coxarius.—T. Curtis, M.D., of Middleport, Ohio (*Medical and Surgical Reporter*, August 3, 1872), publishes a case of morbus coxarius in which life was prolonged by this operation, and believes if the patient had been seen two months earlier it would have been much better for final recovery. He warmly advocates excision after other means have had reasonable time and opportunity to arrest the disease without success, and where there are no very serious contra-indications.

A Piece of Needle in the Heart.—According to the *Cincinnati Lancet and Observer*, at the post-mortem examination of Miss Hoag, of Evanston, Illinois, it was found that death was caused by the presence of a piece of needle in the heart. The needle was driven in by a sudden fall when she was about seven years old. The portion of needle extracted was about an inch and one-eighth long and of large size.

Palpation in Obstetrics.—This subject is one which is almost ignored in American and English text-books, and is but imperfectly taught in the German treatises. The Vienna school probably makes more of this method than any other, but the works of Professors Carl Braun and Joseph Spaeth are so old, that the views of the writers have in many respects changed since these were published, and the books cannot be regarded as reliable exponents of the author's opinions at the present day.

James R. Chadwick, M.D., Boston, Mass. (*Boston Medical and Surgical Journal*, August 15, 1872), gives the results, in a lengthy and practical paper, claimed for this method of practice from the verbal teachings of the various professors, as proved to him from personal observation in the clinics of Vienna and Würzburg. The method of abdominal examination, consisting of *inspection*, *percussion*, *auscultation*, and *palpation*—the latter in its twofold application to diagnosis and treatment—is clearly unfolded. This important subject is to be concluded in a succeeding number of the Journal.

Effect of Ether on Uterine Contractions.—At a late meeting of the Obstetrical Society of Boston, Dr. Abbott (*Boston Medical and Surgical Journal*, August 15, 1872) mentioned a case of labor, in which uterine contractions ceased after the full use of ether; although it has been said that anæsthetics in labor never interfere with the expulsive action of the uterus.

Erythema Fugax following the Use of Chloral.—At a meeting of the Suffolk District Medical Society, Boston, Dr. William Ingalls called attention to a symptom he had observed after the administration of chloral hydrate. He had prescribed a dose of six grains to be given for sleeplessness to a girl of 11 years, ill from general debility. After the first dose, nothing save the desired effect was observed. Sleep also followed the second exhibition the night following, but on the next morning spots of a red color, deeper in hue than erythema, appeared successively on the cheeks, around the mouth, and behind one ear. There were no other symptoms, and the redness receded after eight hours.

Dr. Damon suggested that the appearance alluded to might be classed as *erythema fugax*, a neurosis of the skin depending on some such irritation of the stomach as chloral would tend to produce.

Lithotrity in Children.—Dr. Guersant (*Med. News and Library*) remarks that his own experience and of all those who have performed this operation is favorable to the employment at all ages, even in children fifteen or eighteen months old, without regard to sex. Lithotrity is always applicable to the youngest children when—*First*, the calculus is of but small size, being not more than three-fifths to two-thirds of an inch in diameter, and the surgeon is enabled to operate several times—three times at the most. *Second*, when the general health is good, and the bladder appears to be in good condition and exempt from purulent catarrh. *Third*, when, above all, there are not more than one or two calculi. Lithotrity is, on the contrary, inapplicable—*First*, when the calculus is too large (three-quarters of an inch or more). *Second*, when it is adherent. *Third*, when it is very hard and mulberry-shaped.

A Mode of Operating for Radical Cure of Varicocele.—Dr. H. B. Davison, San Francisco (*Pacific Med. and Surg. Journal*), has adopted a new mode of operating for the radical cure of varicocele, for which he claims three great advantages over any other means:—

First, by perforating only one wall of the scrotum, less pain, less inflammation, and less risk of adhesion of the wounded sac and spermatic cord.

Second, by placing the patient in a recumbent posture when the operation is being performed, so that no blood may be enclosed in that portion of the vein cut off from the circulation, the resultant inflammation will be much less, and the testicle will not swell so much, and absorption will be accomplished in much less time.

Third, by removing the ligature before it cuts through the vein, the risk of phlebitis is lessened, and the patient is enabled to resume his ordinary duties much sooner.

Those who have been operated on have no return of the disease, and it would require a very close examination of the parts to discover that any operation had been performed. In one case the patient had been wearing a suspensory bandage for over twenty years, and the left testicle was much atrophied. It is now about sixteen months since the operation, and the testicle has regained its normal size, and the patient has a corresponding increase of sexual power.

Incontinence of Urine in Children.—Mr. Holmes Coote recommends for this intractable affection the administration of creosote in one-minim doses, three times daily, combined with assafœtida and rhubarb pill, of each two grains.

Cases of Double Ovariotomy.—Professor T. Gaillard Thomas, M.D., New York (*American Practitioner*, July, 1872), reports three successful cases of double ovariotomy, which were performed in the Strangers' Hospital of this city, after an experience of twenty-seven operations of ovariotomy—fourteen of which have already appeared in print. The remaining thirteen are being prepared for publication.

Calculus in a Female.—Dr. Gale, of Owen County, Ky. (*American Practitioner*, July, 1872), at a recent meeting of the College of Physicians and Surgeons of Louisville, mentioned that he had recently removed, by rapid dilatation, a calculus of the phosphatic variety from a female bladder, weighing one ounce, and measuring four inches by three inches and three-eighths. The patient passed water naturally within thirty-six hours.

Ligation of the Internal Iliac Artery.—As a contribution to the literature of this operation, it is deemed advisable, by the friends of the operator, to place on record the following case, which was performed by Leroy McLean, M.D., Surgeon to the Troy Hospital, N. Y., November 19, 1869. The patient, Mary White Dorr, wife of Wm. Dorr, of South Troy, admitted into the hospital Nov. 16, received at the hand of her husband a stab in the left buttock, which caused a deeply seated aneurismal tumor, ten days before the operation.

In the presence of Drs. Cooper, Marmion, Burton, Thorn, Hubbard, Whiton, Hubbell, Ward, Wheeler, Heimstreet, and Gregory, Dr. McLean skilfully ligated the artery—using the silk ligature. The patient died from hemorrhage on the thirteenth day after the operation. Post-mortem examination, under the immediate direction of Dr. H. R. Haskins, then Demonstrator of Anatomy in the Albany Medical College, revealed the following facts: The aneurismal cavity in the left buttock had a capacity of eight fluid ounces. The closure of the artery was seen to have been complete. The sciatic artery was severed at the point of emergence from beneath the pyriformis muscle.

Excision of the Left Scapula.—Samuel Logan, M.D., New Orleans, La. (*Richmond and Louisville Medical Journal*, August, 1872), publishes a case of excision of the left scapular subsequently to resection of the head of the humerus of the same side. He is agreeably surprised at the degree of usefulness of the extremity after such an extensive removal of bone. The patient, male, aged 33 years, during convalescence from small-pox received severe blows on his shoulders, and shortly after began to suffer pain in the left scapulo-humeral joint, followed by caries of the head of the humerus and body of the scapula.

Three months after the operation the wound had almost entirely healed, with the following use of the limb: He could lift readily any moderately heavy article; could pull perpendicularly (lifting) 26 pounds, horizontally, 26½ pounds; by simply flexing the forearm (and not lifting with the body) he could raise 14 pounds; could place his hand on either ear or shoulder, but not on back of the neck, and pass his hand over the whole of his forehead and face; he could not carry his hand behind his back, but could readily bring it so as to sweep over the whole chest and face. The cavity left by the operation was filled almost to the level of the surrounding parts with a somewhat hard mass of new deposit.

The Sun.—Prof. C. A. Young, Ph.D., of Dartmouth College, in his pamphlet on "The Sun and the Phenomena of its Atmosphere," gives interesting particulars concerning this important body: Twenty years ago, the distance from the earth was considered to be about 95,000,000 of miles, but it is really less than 92,000,000. This is the average distance, but the sun is some 3,000,000 of miles nearer on the first of January than on the first of June. In hopes of adding greatly to the precision of our knowledge, astronomers are looking forward with much interest to the coming transits of Venus in the years 1874 and 1882. The conception is too vast to be fairly grasped by the human intellect. If on some intermundane railway between the earth and the celestial metropolis, the Pilgrim Fathers had started from the sun at the same time when they really left England, and if they had travelled by special express at the rate of 40 miles an hour, without stops, they would not yet have arrived, nor would their train be due until 1883—363 years upon the road. A cannon ball, moving straight on unretarded with its swiftest speed, could not make the journey to the sun in 9 years.

The sun weighs very nearly 325,000 times as much as the earth. If it were made of solid coal he would burn entirely out in less than 6,000 years. The probable and almost universally accepted theory in regard to the nature of the solar surface is the following: It is neither a gaseous nor a liquid surface, but a stratum of luminous clouds, made up of drops of melted metal—of incandescent iron, magnesium, sodium, etc., far more intensely luminous than the gases from which they are condensed, driven and carried by the solar winds, and continually changing their form and appearance. The doctrine, supported by Carrington, Lockyer, and others, that the sun-spots are caused by a *downrush* of cooler gases from the upper atmosphere, seems to him to be the correct one. They are found only on certain portions of the sun; while they are rarely seen upon the sun's equator, they are almost never found in latitudes higher than 40°, and are most abundant in two belts lying between the parallels of 15° and 30°. Above the photosphere, the lower strata of the solar atmosphere for a height of from 500 to 1,000 miles contain pretty much all the substances whose presence is indicated by the dark lines in the solar spectrum (made up of metals), and that in the absorption of these lower strata the lines mainly originate. At a greater elevation the solar atmosphere consists principally of hydrogen, with two or three substances whose nature is as yet unknown. The prominences of the sun are extensions or off-shoots of the stratum of hydogen, to which Dr. Frankland gave the name of chromo-sphere, *i. e. color-sphere.* Besides steamers and jets there are other forms of eruption prominences, resembling in shape gigantic mushrooms, sometimes great pyramids, and sometimes the smoke of a distant steamer. The author is sometimes disposed to take refuge in the hypothesis as to these solar eruptions—that they are only apparent, not real; still the

evidences of actual motion are so numerous and conclusive, we must be content in hoping that the sun will not take to bombarding us in some fit of passion. The inner corona is really solar, but as to the nature and constitution of the outer corona, the assemblage of the dark rifts and bright rays which overlie and surround the inner corona, it is less complete. For a more perfect knowledge of the nature of the corona, astronomers wait with patience for the eclipse of 1878.

Fracture of the Fibula.—W. W. Keen, M.D., Philadelphia (*Philadelphia Medical Times*, Aug. 15, 1872), in speaking of this fracture, from one to three or four inches above the malleolus, remarks that, so far as his experience goes, external lateral displacement of the foot is by no means so common as is taught in many text-books. In four fractures of this bone in this situation, under his care in St. Mary's Hospital, and one in private practice, not one presented any displacement. When a patient presents himself with this accident, and especially if the swelling is great, it is by no means easy to make a differential diagnosis between a fracture of the lower end of the fibula and a bad sprain of the ankle-joint. He desires to recall the attention of the profession to the following sign of such fractures: In the normal condition the astragalus is mortised in between the malleoli so securely that no lateral movement of that bone is possible. When, however, a fracture of the fibula occurs above the malleolus, the ends of the fragments at the point of fracture approach the tibia, or, by grasping the leg at this point, can be made to approach the tibia, and thus the inter-malleolar space is widened. The result at once is, that lateral movement of the astragalus becomes possible. In order to obtain it best, grasp the leg firmly with the left hand at the probable site of the fracture; grasp the foot with the right hand, the palm being applied to the sole, and the thumb and fingers to the astragalus itself; then bring the astragalus next the fibular or external malleolus, and endeavor suddenly to strike it against the internal malleolus, which is firm and immobile. If there be a fracture, the impact of the bones will be readily felt in most instances. One caution must be noted: the lateral movement of the tarsal bones, especially between the os calcis and the astragalus, and the os calcis and the cuboid, must not be mistaken for this lateral movement of the astragalus. The *astragalus* must be seized and moved laterally, and not the *foot* itself twisted *internally*.

Cystic Tumor of the Neck.—H. H. Toland, M.D., San Francisco, California (*Western Lancet*, July, 1872), contributes an interesting paper on this subject, and relates, with photographs, a case of removal of an enormous tumor from the right side of the neck in an adult male patient, who had been treated for goitre or bronchocele.

The publication of rare surgical cases, attended with fine photographs, is a prominent feature of this new San Francisco journal.

Rapid Development of an Aural Polypus.—Dr. C. E. Wright, Indianapolis, Ind. (*Ind. Jour. Med.*, July, 1872), had an opportunity of exhibiting, in his practice, a case of aural polypus which was perfectly developed in a few hours. The patient, a boy æt. 14, was annoyed by a herpetic eruption in left meatus, having been afflicted with otitis media several years ago, and after careful examination was treated; the next day, on a second examination, he found to his astonishment a medium-sized polypus attached to the upper wall of the left meatus, about one-fourth of an inch from the auricle. He is satisfied that there was no sign of polypus on the preceding day.

Ulcer of Cornea and Dental Abscess.—That a diseased tooth may be an immediate cause of a corneal ulcer, or an active agent in prolonging its cure, Dr. C. E. Wright, of Indianapolis, Ind. (*Ind. Jour. Med.*, July, 1872), would admit. He publishes the case of a lady, æt. 40, who had an indolent round ulcer on the corner of the right eye, and had been subject to violent paroxysms of toothache and neuralgic pains on right half of face and head for months; after proper ophthalmological treatment she was advised to consult her dentist, Dr. P. G. C. Hunt, who extracted the first upper molar on right side, finding an abscess at the root. The same treatment of the eye was continued, and in about three days the eye was well.

Premature Artificial Labor.—The advantages of this mode are discussed by Dr. Adolph Andrei, San Francisco, Cal., in the July number of *The Western Lancet*, who remarks that to England is due the credit of having first raised the question of premature artificial labor, and to have put it into practice. In 1756, according to the reports of Denman, many celebrated physicians of London, in consultation, were of common accord that it was advantageous, and was approved by the principles of morality.

As a *résumé* of all reported cases, he gives: Number of operations, 475; number of mothers saved, 459; number of mothers died, 16; number of infants survived, 304; number of infants born dead, 171.

According to the statistics of Dr Clazure, son of d'Angoulême, the results furnished by symphyseotomy and Cæsarian section are as follows: Number of operations by *Symphyseotomy*, 157; number of mothers saved, 85; number of mothers died, 72; number of infants saved, 5. About half of the women die after section of the symphysis pubis.

Cæsarian Section.—Number of operations, 490; number of mothers saved, 124; mothers dead, 366; infants saved, 76. Though almost two-thirds of the women died, the operation was thought to appear to be indicated. Duges, Velpeau and La Chapelle regarded these results as much more favorable than ordinarily follow Cæsarian section.

The Movement Plan in Elbow-Joint Fractures.—W. F. Peck, M.D., Davenport, Iowa (*Atlanta Medical and Surgical Journal*, July, '72), reports three cases of fractures and contusions of the elbow-joint, to illustrate the benefits of an occasional judicious passive movement for the prevention of anchylosis. In accepting the views of Cohnheim, Recklinghausen, and Simon upon inflammation, the value, or rather the explanation made as a cause of the beneficial results of the treatment recommended, he says, is seen in the pathological operations of the *leucocyte*, which undeniably possesses an independent life, and which plays an important part both in reparative and destructive inflammation. When proper movement of the joint is practised, he states with much boldness that stasis, ending in semi-organization of matter or suppurative inflammation, is much less liable to occur.

Malarial Hæmaturia.—A unique case of this disease is recorded by Chas. P. Gordon, M.D., Dalton, Ga., in the July number of the *Atlanta Medical and Surgical Journal*. He regards malarial hæmaturia as a violent form of congestive fever, with involvement of the renal organs in active congestion and inflammation, attended with all the danger and fatality consequent

upon an obliteration of their proper function, and the retention in the blood of those elements excreted by the kidneys. As there are in congestive fever the cerebral, thoracic, and abdominal varieties, he would add another, *the renal variety*, in which the congestive tendency is to the kidneys, with all the pernicious results following malarial hæmaturia.

Aneurism of the Orbit.—At the June meeting of the Washtenaw County Medical Society, Dr. G. E. Frothingham (*Michigan University Medical Journal*, August, 1872) spoke of a case of aneurism of the orbit which was then under his care, and for which he ligated the common carotid artery. The patient had recovered from the effects of the operation, but, though improved, it was still uncertain whether the cure would be complete. A full report of the case will be recorded in some future number of this journal.

Sensation in the Mouse's Ear.—Dr. Schobl, of Prague, has made a distribution of nerves to the ear of the mouse a subject of special examination, and calls attention to the fabulous richness of this organ in nerves, the bat's wing being in comparison but poorly supplied. The ear of a mouse of ordinary size presents on an average 6,000 nerve terminations, or for both ears, 12,000. The function of this elaborate development is probably, as in the case of the bat's wing, to enable the animal to guide its way through dark narrow passages.

Prevention of Small-Pox.—Dr. Carl Both, of Boston, Mass, in a monograph on "Small-Pox, the Predisposing Conditions and their Prevention," states that vaccination has not proved to be an absolutely reliable preventive against this disease; and maintains that small-pox consists in the escape of superfluous albuminous substances into the tissues of the periphery of the nervous centres of the body, caused, in the first place, by the want of salt. That the proper use of salt is the scientific and most certain preventive of small-pox, both in theory and practice. That the use of organic acids is the best means of freeing the blood from abnormal substances which, for the time being, may substitute the place of salt in the body. That alcohol is an agent which eliminates the blood-salts, and therefore, after its use, the salt thus eliminated must be restored. That sugar can take the place of salt in regard to taste, much to the injury of the blood of the person substituting it. That in mental labor, more salt is brought into requisition, and used up, than in muscular or physical labor; and, therefore, that more must be used or taken into the body in the former case than in the latter. That a person who has a properly balanced blood cannot catch or take small-pox under any circumstances of exposure. If correct, this theory, he affirms, must hold good in all cases, without a single exception; and if nothing can be found to disprove its correctness, it holds good that the proper use of salt in the human economy will eradicate the disease at once and forever. He would have the use and office of salt more generally known and taught in all our public schools.

Poisoning by Rumex Acetosa.—A case of death from poisoning by "sorrel" (Rumex Acetosa) is related by D. W. Brodnax, M.D., of Cameron, Milam Co., Texas, in the July number of the *Richmond and Louisville Medical Journal*. The patient was a boy aged 6 years, who, in the language of a playmate, had eaten "a good deal of sheep sorrel." Although oxalic acid is said by writers on toxicology to be very speedy in its effects, in this case it had been twenty-four hours before his parents became sufficiently alarmed to call a physician, although he had been complaining, and his stomach very irritable, with frequent vomiting, during that time.

An Uncommon Case of Fatty Degeneration.—C. A Todd, M.D., of St. Louis, Mo. (*St. Louis Med. & Surg. Jour.*, Aug. 1872), relates an interesting case of fatty degeneration, the patient being a female, colored, aged 51, under the care of Dr. Cooper, in which the results of the post-mortem were as follows: Length of body, 5 ft. 3 in.; circumference of body over hips, 8 ft.; greatest circumference of one thigh, 4 ft. 2 in.; of the other, 42 in.; of one arm, 25 in. Cutting through the skin, in the subcutaneous cellular tissue were found solid masses and layers of yellow fat three inches thick over the ensiform cartilage. The tendency to obesity commenced about the age of 22. It required seven men, with the assistance of straps passed under the body, gradually and with much effort to drag the body into the box placed at the side of the bed to receive it.

Cases of Aspergillus.—Three cases of aspergillus in the external ear are reported by W. W. Seely, M.D., of Cincinnati, Ohio, in *The Clinic* of Aug. 3, 1872. The use of carbolic acid, grs. v. ad ʒ i., was quite sufficient in these cases as an antiparasitic. The first case exhibited the immense disturbance such growths may induce. The third case showed the long continuance of the growth, at least three years.

Hydrophobia.—Prof. John C. Dalton, M.D., of New York (*Pacific Med. and Surg. Journal*), in a lecture delivered at the Medical College of the Pacific, gave the following statistics concerning this rare disease. During the six years from 1863 to 1867, inclusive, 107 cases occurred in France. Taking the average population of that country as thirty-six millions, this would give one case every two years for each million of inhabitants. In the Department of the Seine, including Paris, the population averaging one million, there was, for the twenty years from 1842 to 1862, an average of two and one-third cases each year. In New York, for the six years from 1866 to 1871, there were 22 cases, an average of two and two-thirds each year. He judges, from statistics, that three cases of hydrophobia occur a year to every million of people.

Heart Disease.—In a paper on "Observations upon Over-Work and Strain of the Heart," by J. B. Treadwell, M.D. (*Boston Med. and Surg. Jour.*, Sept. 5, 1872), it is noted that during the late civil war 10,636 white and 161 colored soldiers were discharged on "surgeon's certificate of disability" for "heart disease." He has been favored with statistics from Vol. I. of the *Medical History of the War of the Rebellion*—not yet issued, through the kindness of the Surgeon-General U. S. A. The tables from which these figures are abstracted show the cause of discharge of about 200,000 men, or over two-thirds of the number actually discharged during the war. Thus out of every 1,000 discharged, 53 were discharged for disease of the heart.

Oxygen in Suffocation from Coal-Gas.—Dr. J. G. Blake, of Boston (*Boston Med. and Surg. Journal*, Aug. 29, 1872), publishes three cases of suffocation from coal gas, brought to the City Hospital, in which the inhalation of oxygen was followed by an almost instantaneous improvement of the patients. This relief was followed at first by a relapse whenever the administration of the gas was discontinued. Soon, however, the improvement became permanent, and the patients were discharged well.

Palpation in Obstetrics.—James R. Chadwick, M.D., of Boston (*Boston Med. and Surg. Journal*, Aug. 22, 1872), writing from Vevey, Switzerland, gives the subjoined chief advantages in favor of palpation as practised in Germany: 1. That by it the period of the

pregnancy may be approximately estimated. 2. That the diagnosis of the fœtal presentations and positions may be made during the later months of the pregnancy and the first stage of labor, when internal examination yields very meagre results. 3. That twins, extra-uterine pregnancy, the death of the fœtus, the size of the fœtal head, complicating tumors, and many other conditions may, by it, be recognized long before the vaginal examination would reveal them. 4. That the external examination may be made many times, and by many persons, without any risk of doing harm. On this account it recommends itself especially for purposes of instruction. *In the way of treatment*, version can be performed by external manipulation with much greater chance of success than by the internal; and with this gain *to the mother*, that the danger of inflammation and rupture of the uterine walls is reduced to a minimum; that in case of hemorrhage or other threatening symptom, turning by external manipulation may be resorted to, if thought expedient, much earlier than the old method; and *to the child*, that it thereby escapes the greater mortality attendant upon breech presentations.

Hydrate of Chloral.—The following are some of the conclusions of Dr. Lawrence Turnbull, of Phila., Pa. (*Med. and Surg. Reporter*, Aug. 24 and Oct. 31, 1872), as drawn from his experiments, observations, etc., on this subject. 1st. There are three degrees of the operation of chloral on animals and man. The first is feebly soporific, with slightly nervous sedative action. The second is an intense soporific action, with diminutions of sensibility. At this period there is a deep sleep of variable duration, without apparent trouble of the principal functions of life. The third degree, complete anæsthesia, with total loss of general sensibility and muscular power—cataleptic state. Death almost always follows this degree of action, as was seen in his experiments on animals. 2d. Under the microscope the blood was seen moving, with some bright-red, or dark-red particles. 3d. Death takes place last at the heart, which is kept in action long after all signs of death in the animal were present, as shown by removing the sternum, etc. 4th. Sleep, with diminished heat of the surface one or two degrees below the natural standard. 5th. In typhoid and typhus fever one must commence and continue in small doses; five grains is the average quantity required. 6th. It increases the flow of the menstrual fluid. 7th. Seventy grains of the hydrate of chloral is equal to ½ grain of morphine employed hypodermically, and is not apt to cause so much disturbance of the stomach. 8th. Males require a larger dose than females. 9th. In affections of the eye it requires care to use it, as it is apt to cause swelling, redness, and excessive flow of watery secretions, with obscuration of vision. 10th. In sunstroke or heat toxæmia, it is a valuable aid to produce sleep in that restless state after reaction produced by frictions of ice and ice-water to the head and body. 11th. In cases of impending death the means are to support the system by heat, food, and artificial respiration, with stimulation and small doses of strychnia.

Hydatid Cysts passed per Rectum.—Dr. C. C. Sherard, of Mobile, Ala. (*Med. and Surg. Reporter*, Aug. 17, 1872), reports the case of a married woman, aged 29, in which a large quantity of hydatid cysts were involuntarily discharged from the rectum during a period of five days. When called, he supposed that the patient had a lateral retroverted womb, with the fundus in the left iliac fossa. Fourteen days after the last discharge the patient passed a lump from the rectum about the size of a hen's egg, which resembled a piece of boiled gristle. He was induced to believe it was the base of the hydatids. There were some singular features presented: The first hydatids came away in bunches, and each cyst appeared to be about the size of an ordinary marble, perfectly sound, as seen by the eye. Smaller cysts were passed, and, under a low magnifying power, presented the appearance of bunches of grapes. She had been suffering for the last eight years from a very fetid discharge from both ears; as soon as she was taken sick the discharge ceased, and the swollen and ulcerated condition of the meatus disappeared.

Dry Earth as a Surgical Dressing.—P. S. Conner, M.D., Surgeon to the Good Samaritan Hospital, Cincinnati, Ohio (*The Clinic*, Sept. 7, 1872), has been using the earth dressing, as advocated by Dr. Addinell Hewson, of Philadelphia, in 14 surgical cases, at the Good Samaritan Hospital, and has thus far been much pleased with the results of this treatment. He will continue to use it whenever he finds it practicable so to do; and from a trial of it, extending over a three months' period of time, he heartily recommends it to the use of those who have not tried it.

Commencements of the Medical Colleges of St. Louis, Mo.—The degree of M.D. was conferred upon 40 graduates at the commencement-exercises of the Missouri Medical College, held March 6th, 1872. This is the oldest medical institution in the West. March 13th, the graduating class of the St. Louis Medical College, numbering 68, received diplomas. The latter college has been in existence thirty-one years, and its alumni now number 1218.

Rotunda Lying-in Hospital, Dublin.—Dr. S. H. Garwin writes as follows from Dublin to the *Rich. and Louis. Medical Journal*, in regard to this lying-in hospital, with which Dr. Alfred H. McClintock is connected, founded in 1745, by Dr. Bartholomew Mosse. It contains 130 beds, and as a school of midwifery, it is the oldest and largest in the kingdom,—number of deliveries up to January 1, 1870, 192,201. Proportion of males and females born, about 12 males to 11 females; of children dying in hospital, about 1 to 28; of children still-born, about 1 to 18; of women having twins and more, about 1 to 62; of women dying in child-bed, about 1 to 80; of women having 3 or 4 children, about 1 to 4,500. Among its late masters, are men like Kennedy, Johnston, Skelton, McClintock, and Denham. The present master is Dr. Johnston.

Minnesota State Medical Society.—At the fourth annual meeting of this society, held Feb. 6th and 7th, at St. Paul, the election of officers for the ensuing year resulted as follows: *President*, W. W. Mayo, M.D., Rochester; 1st *Vice Pres.*, W. W. Sweney, M.D., Red Wing; 2d *Vice Pres.* C. McCormick. M. D., Duluth; 3d *Vice Pres.*, W. L. Lincoln, M.D., Wabashaw; *Treasurer*, S. B. Sheardown, M.D., Stockton; *Recording Secretary*, Chas. E. Smith, M.D., St. Paul; *Corresponding Secretary*, W. F. Hutchinson, M. D., Minneapolis.

New Medical School.—The new College of Physicians and Surgeons at Wilmington, North Carolina, has been organized—Dr. J. Francis King is President, and Dr. William Walter Lane is Dean.

Heart Disease.—Dr. Quain, of England, states that in that country during the last twenty years, the total of deaths of males from heart disease has increased in number from 5,746 in 1851, to 12,427 in 1870. The percentage of deaths from heart disease for 1,000 of population living, was 755 between the years 1851 and 1855; it has risen to 1,085 from 1866 to 1870.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE MEDICAL REGISTER AND THE PROFESSION.

Whenever a work is undertaken for the benefit of a large number of persons, it is impossible to satisfy all. No reasonable mortal expects it, so long as the truth of the old adage, *humanum est errare*, is admitted to have such a universal application. But this should not deter the workers in a good cause from constantly aiming at perfection, and at reducing their errors to a comparatively insignificant number. The fault-finders and critics are always beneficial, in their way, in humbling an unjust pride in our own resources and capabilities; at the same time they stimulate the right-minded and the laudably ambitious to increase their zeal, and keep them constantly alive to their duties.

These remarks may have an application as general as the truths upon which they are founded are self-evident, but we have thought some good might result by giving them a special reference to the labors of such gentlemen as manage the *Medical Register* of this State. This annual, commencing with the very interesting, valuable, and suggestive little work of Dr. Tucker, has grown into an acknowledged authority as a register for all the respectable medical practitioners of the State. To such an extent is its general accuracy relied upon, that any gentleman of good standing, whose name may be accidentally omitted, holds a very questionable position in the eyes of such as he may claim as his medical brethren. The burden rests with him to prove why he was left out, and the explanations for the omission are by common consent received *cum grano salis*. This is the natural consequence of a reputation which the *Register* has earned for itself, for care and accuracy in making out its lists. There is no doubting the fact, that the responsibility of editing such a work is great, and the possibility of errors should be admitted in a friendly spirit, and with becoming grace and resignation. Speaking for the profession, we are willing to do this. When we have done this, however, we have performed our duty with those who not only are perfectly willing to encourage such a work, but who are compelled to acknowledge its necessity. Its general reputation as a trustworthy record is such, that more than ordinary care is now requisite to keep it in its present position.

If we for a moment glance at the manner in which the work is conducted, and upon whom the responsibilities of its correctness rest, we shall be better prepared to answer some of the questions which very many of those who deem themselves unjustly treated are constantly propounding. The Editor of the *Register* is the only gentleman who assumes the responsibility of the accuracy of the work. In reality, however, his responsibility, with the exception of collating the necessary material, arranging the forms and reading the proof, is no more than belongs to each member of the Medico-Historical Society, under whose direct supervision the publication is made. This Society, ever since it took charge of the work in question, has voluntarily performed the duties of canvassers for the entire city and vicinity. Each physician in a given district is visited, the objects of the work explained, and he is asked to show his credentials for respectability. If he does not choose so to do, the only penalty is, to be omitted from a register which claims to contain the names only of such as are known by the society to be regular practitioners. It does not pretend to say that because the name of any gentleman is left out, he is on that account an irregular practitioner; but, by common consent with the majority of the profession, the inference is that something is wrong. The reason for this opinion is founded upon the fact, that very few find it to their interest to stubbornly ostracise themselves. There are always to be found some in a community who never have a disposition to go with the respectable majority, and who will always fall back upon their individual independence, and defy the general verdict; but this is now so much the exception that the rule is to complain for being neglected. With some of these there are always reasons given extra of those for which they themselves are responsible, but with others, which we confidently believe are in the minority, the whole blame is placed upon the Editor and his co-laborers.

Of a number of communications from gentlemen who show apparent good reason for being overlooked and unjustly treated, we select the following, which speaks for itself:—

New York, Sept. 7, 1872.

"My Dear Dr.—In your notice of the *Medical Register* in The Medical Record of August 15, you speak very justly of the importance to the profession of such a work, and you might have added, while eulogizing its Editor, the importance also of such a work being carefully and correctly edited and published. It arrogates to itself the character of being a correct list of *all* the medical practitioners in good standing in their profes-

sion. To deserve or support this character it should *be free from errors*, and could be if its compilation and publication was properly supervised. The Editor, in another place, speaks of the arduous nature of such a work. Nobody questions this;—so are a physician's duties arduous and responsible. But as both voluntarily assume their labors and responsibilities, the public do not feel willing to excuse their mistakes on that account.

"The *Medical Register* has become a necessity in the profession. Allow me to ask whether a work of so much importance should be left entirely to a clique of young medical practitioners, by whom complaints of errors are treated with contemptuous *nonchalance*, feeling that they have no personal responsibility in the matter? Should it not rather be in the hands and under the supervision of a body of men well known to the profession, and having their confidence? For instance, the Academy of Medicine, or the New York County Medical Society, when, if mistakes should occur, we would be likely to secure a respectful hearing, and such correction of the error as circumstances would permit?

"You complain—I confess with the resignation of a martyr—of having your 'residence advertised half a mile from its true location.' Permit me to say that my *name*, *residence*, and *office hours are left out altogether*, and that too after they had been solicited by one of the 'Society,' and the money paid in advance for a copy of the *Register*. Whether this is the result of a personal pique, or a careless mistake, I have no means of knowing except from a very lame and unsatisfactory explanation of the Editor, such as:—'Name stricken out by mistake, instead of another Dr. ******—I am sorry, but it cannot be helped (!)—will send around a Supplement,' etc., etc.

"Now, Mr. Editor, what satisfaction is there in all this? *The mischief is done and can't be repaired*, and done most carelessly and inexcusably too.

"Faithfully yours,
******."

This epistle is, on its face, a proof that sometimes very awkward mistakes are made, and that, with the best of intentions to do what is right on the part of the Editor, some one is injured. As before intimated, this is no more than we have a right, on general principles, to expect. In the present instance retribution is promised, tardy though it may be, in the Supplement, which is to be corrected accordingly. This, however, does not make the immediate result of the original blunder the less, since it denies to the wronged individual the right of respectability until such time as the said Supplement appears. A mere accidental stroke of the pencil or pen through a person's name is an excuse which, under the circumstances, few could accept without feeling aggrieved, and still fewer would be willing to acknowledge such action a proof of the amount of responsibility felt by the Editor. Upon the absolute accuracy of the list depends the real reputation of the *Register*, and too much care cannot be taken to keep it free from every source of error.

The excuse for omitting the name in question, it must be confessed, is a lame one; and in view of the importance to any respectable practitioner of being in such a list, it naturally suggests to the mind of our correspondent the feasibility of some court of appeals, before which cases of this sort, as well as others of which reasonable doubts as to respectability might be entertained, can be judged. The suggestion opens a very important question, which should be answered irrespective of party, or of person. The accidental omission of a name may be remedied, but any one who believes himself to be respectable, and who is persistently omitted from the *Register*, has a right to inquire if his character and his claims are to be judged only by a self-constituted tribunal. The Editor of the *Register* and the Medico-Historical Society are above the suspicion of wilful wrong to any one. They have certainly made the work what it now is, and really for their unpaid labors deserve more of the profession than can ever be given them, either in pelf or praise, but as a matter of justice to any one who thinks he is not treated rightly they have no right to be the court beyond whose decision there is no appeal. But acknowledging all this, how, as a profession, are we to better ourselves, and to get the *surveillance* of our brotherhood more perfect or more impartial? The Medico-Historical Society have, by the performance of very arduous duties, won the confidence of the vast majority, and they certainly deserve its continuance. The errors committed will have as much effect in stimulating them to do better, as they will have upon any other body of medical men. We are in fact convinced that far from any good effect which the County Society or the Academy of Medicine may have as a supervisory body, they would be positive drawbacks to the usefulness of the *Register*, or the real efficiency of the Medico-Historical Society. Every one can appreciate this who is acquainted with the manner in which committees are made in our Societies, their constant tendency to change, and the general lack of interest they feel in outside professional matters. We doubt, even allowing these objections to be unfounded, that any other society would undertake the tasks which should belong to a court of appeal. Every such organization has too much business of its own to make any proposition looking in the direction of extra work at all practicable.

Again: How is it possible for any respectable medical man to have a claim to bring his case before a society, unless he be a member of that body? If he be a member in good standing which shall entitle him to the consideration of such a hearing, the Medico-Historical Society have no right to omit his name. Or, if a gentleman who is not connected with any society desires to be mentioned in the *Register*, all he has to do is to become a member, and the difficulty is settled at once. If he finds such membership with any of the nu-

merous organizations impossible, he certainly has no right to be in respectable company.

As we look upon it, the Editor of the *Register* and the Medico-Historical Society are only a self-constituted tribunal in the light of being better qualified to judge of the shortcomings of the profession than any other body of men in it. They solicit information and suggestion from every quarter, and utilize them for the general good. They have striven to be just, and have not, in view of their reputation, dared to be partial. We cannot expect them to be perfect, but as they have given us so much reason to confide in their good judgment and efficiency heretofore, we gladly seize the opportunity which a criticism affords of stirring them up to greater diligence and to more watchfulness.

Reviews and Notices of Books.

THE PRINCIPLES AND PRACTICE OF SURGERY. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., Professor of the Practice of Surgery, with Operations, and of Clinical Surgery, in Bellevue Hospital Medical College; Visiting Surgeon to Bellevue Hospital; Consulting Surgeon to the Bureau of Surgical and Medical Relief for the Out-door Poor at Bellevue Hospital; to the Central Dispensary, and to the Hospital for the Ruptured and Crippled; Fellow of the New York Academy of Medicine, etc. Illustrated with 467 engravings on wood. New York: William Wood & Company. 1872.

THIS work of Dr. Hamilton has evidently been prepared with the greatest care both on the part of the author and his publisher; and as a text-book for the student it reflects the highest credit upon its well-known and gifted writer.

That Dr. Hamilton has, within the compass of a single volume of moderate size, presented to the reader instruction necessary to a good understanding of the subjects that come under the domain of surgery, and that, too, in a style succinct and agreeable, must be the opinion of all those who will give the work a careful perusal.

While the familiar terms in general use by both English and American writers are retained, the nomenclature of diseases as adopted by the Royal College of Physicians and Surgeons of London is also added, which our author regards "as the most suitable 'universal' and standard nomenclature hitherto devised."

At the same time the work is well illustrated; we are pleased to say that the majority of the engravings do not come under the head of the "time-honored ones," of which we have become heartily sick.

The work, as with similar treatises, is divided into two portions; viz., General and Regional Surgery. While speaking upon the subject of inflammation, that of irritation is also discussed, and set forth in such a clear and proper light that the student will be impressed with its great importance.

After closing the chapter upon ulceration, the subject of healing of ulcers by transplantation is very graphically treated, and sufficient of the literature added to thoroughly acquaint the general reader of what has been done in this direction.

Under the head of wounds more space has been given to those produced by the Indian arrow than we have seen in any similar work.

Gunshot wounds are well treated, though we are afraid that from some sentences (especially the third paragraph on page 98) a student might be led to use the probe too freely in the examination of these injuries, though we do not wish to be understood that the practice of probing cavities is advocated. We must take issue at once with this sentence on page 116: "If a ball has entered the liver and lodged, it may be proper to search for it carefully with a probe." The chapters on venereal diseases are remarkably well adapted to present the student with a full and correct knowledge of these affections; and it is needless to add that the same is to be said upon the subject of fractures and dislocations.

While speaking upon the treatment of aneurism we feel sure that what our author says of compression is also now the experience of very many surgeons, viz., "that it is by no means so certain a remedy as the ligature, and that it is in most cases a much more tedious and often a very painful process."

We should take up too much space were we to notice each portion of the work separately; and while we should have desired to have seen certain subjects a little more fully treated, yet we must say that we have found far more to praise than to criticise in the work before us; and that as a text-book for the student, or one of reference for the busy practitioner, it undoubtedly is one of the best and *most modern* that has yet appeared.

THE PHYSIOLOGY OF MAN: Designed to represent the existing State of Physiological Science, as applied to the Functions of the Human Body. By AUSTIN FLINT, Jr., M.D., Prof. of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, N. Y., Attending Physician Bellevue Hospital, etc., etc. (Vol. IV.) Nervous System. New York. D. Appleton & Co. 1872. 8vo, pp. 461.

THE great importance of the study of diseases of the nervous system is more and more appreciated as new facts bearing upon the subject present themselves to the notice of the practitioner. In order, however, to lay a substantial foundation for this study, an accurate and thorough knowledge of the normal actions of the encephalon, spinal cord, and accessories is absolutely necessary. The present work is intended to perform this latter office, and so far as it goes must be admitted to be a very satisfactory *exposé* of all the main and instructive facts at present known upon the subject. The field is such an extended one, and the theories based upon the facts brought out by experimental physiologists are so numerous, and, in many instances, so conflicting, that more than ordinary caution and discrimination is requisite to reconcile them to the demands of candid scientific investigation. Our author has faithfully endeavored to perform this part of his task, and as a result has presented to his professional brothers a work which cannot fail to be both interesting and instructive. Wisely ignoring theories only so far as they can be proved by the results of careful personal experimentation, the treatise is apt to stand for a considerable time on such merits. One theory must eventually give place to another, but the stubborn facts which are brought out independently of them must remain as permanent contributions to physiological science. Almost all the data are verified by the author himself, and not a few original experiments enrich the results of his observations. The positive method of study adopted by the author is the only true one to insure a valuable contribution to such a rapidly advancing study, and when we say that he has performed this labor with the conscientiousness of a careful worker, we can say

nothing more to recommend his labors to the student and practitioner.

The work is elegantly printed, and the style, although severely terse, is in keeping with the design of our author, to present facts to be mastered by careful study, rather than a verbiage which aims more to amuse than to edify.

THE NEW LAWS OF HEALTH, or How Disease is produced and can be Prevented. By J. R. BLACK, M. D. Phila: J. B. Lippincott & Co. 1872. 12mo, pp. 322.

THE new laws, the observance of which is, in the opinion of the author, necessary to the prevention of disease, are summed up as follows: 1. The use of pure air; 2. Good food; 3. Out-door exercise; 4. The adequate and unconstrained covering for the body; 5. The proper exercise of the sexual functions; 6. Acclimatization; 7. Avoidance of overstraining of the body; 8. Personal cleanliness; 9. Tranquillity of mind; and, 10. The prevention of intermarriage.

The author has certainly done a good service to the laity, for which the book is evidently written, in bringing to their notice some of the fundamental principles connected with the observance of health. Although many of his statements may be received with some allowance by the hygeist, all the errors of judgment are on the safe side.

MODERN MEDICAL THERAPEUTICS: A COMPENDIUM OF RECENT FORMULÆ, AND SPECIFIC THERAPEUTICAL DIRECTIONS. By GEORGE H. NAPHEYS, A.M., M.D. Third Edition. Revised and improved. Philadelphia: S. W. BUTLER, M.D., 115 South Seventh Street. 1871.

OF the book we can only say that it is excellent of its kind. Its merits are just such as are possessed by the note-book of an attentive student at lectures—jottings down, namely, of the advice of the teacher. The fault of all such books is that they assist in making the user more helpless than he was before. To copy the treatment of an able physician may be well if intelligently done; but human laziness being what it is, we would rather have the deliberate opinion of a dull practitioner than to have his dull selection from other men's prescriptions. Such a book may occasionally prove useful when the physician is in too great a hurry to take thought, but to postpone prescribing would be better still. We believe in labor-saving machines, not in thought-saving books.

THE LETTSOMIAN LECTURES, delivered at the Medical Society of London, 1872: On the Pathology and Treatment of some Diseases of the Liver. By S. O. HABERSHON, M.D., London, F.R.C.P., Physician to and Lecturer at Guy's Hospital, etc. Lindsay and Blakiston. Philadelphia. 1872. 8vo. pp. 95.

HERE is a book quite admirable of its kind. The mechanical execution is all that could be desired, and the discussion of the subject more than could have been expected in the narrow limits to which the author restricts himself. He enters without preamble upon his subject, and, in a clear and succinct style, places before us a body of anatomical, physiological, and clinical observations, so compact that they can be comprehended and appropriated only by the most careful reading and re-reading.

Chap. 1, "The Liver and its Nerves," is the most original and valuable of the three. It recites the anatomical relations of the pneumogastric, sympathetic, and phrenic nerves to the various tissues of the liver, and explains how morbid innervation of centric origin modifies, restricts, or exalts their function. The clinical inference stated and implied is, that a very considerable portion of the functional diseases of this organ are best treated by general hygienic medication,—and that some of the serious structural diseases are not benefited by active doses of calomel, blisters, etc., etc.

An example of this sort will occur to all those who have seen very aggravated cases of simple jaundice conducted to recovery, *cito, tuto, atque jucunde*, by heroic abstention from medicine, release from labor and care, and a trip to the mountains.

Some cases of that rare and very interesting disease, acute yellow atrophy—of which young parturient women are the special subjects, and of which moral impressions appear to be among the prominent exciting causes—are given, and may be compared with the history given in this journal (Vol. 6, p. 265) by Dr. W. M. Chamberlain, of this city.

Chap. 2, "The Liver and its Vessels," after a similar anatomical proem, discusses the dependence of certain forms of hepatic congestion upon disease of the right heart and lungs. An inference not suggested by the author occurs to us, that, perhaps, the amyloid and fatty degeneration of the liver in phthisis which has ordinarily been attributed to the excessive ingestion of hydro-carbons, such as cod-liver-oil and whiskey, may be due to the pulmonary disease. Portal obstruction, inflammation of the portal veins, of Glisson's capsule, and cirrhosis are well treated. The differential diagnosis of these affections is clearly and sharply worked out, and the therapeutic indications fairly stated.

Chap. 3, "The Bile and Bile Ducts," spasmodic, catarrhal, inflammatory and mechanical occlusion, are well discussed and illustrated; and cancerous and hydatid disease more briefly.

This volume will not usurp the larger place of such works as Frerich's, and Budd, and Murchison, as books of reference, but will be read with satisfaction by students and practitioners.

THERMIC FEVER, OR SUNSTROKE. By H. C. WOOD, Jr., M.D., Professor of Medical Botany, and Clinical Lecturer in the University of Pennsylvania, Physician to the Philadelphia Hospital, &c. Boylston Prize Essay. Philadelphia: Lippincott & Co. 1872. 12mo, pp. 128.

THE great mortality of the present summer from causes discussed in this book attests its timeliness and importance, and the "imprimatur" of the trustees of Boylston Prize Fund assures us that we have here a valuable contribution to the literature of the subject.

The book is full of accurate experimentation and careful analysis, the value of which will be appreciated best by advanced students of physiology.

The author admits three forms of grave disease resulting from heat: 1st. Acute meningitis or phrenitis, the existence of which he considers doubtful, having never seen a case. 2d. Heat-exhaustion, of which he cites but one case, and asserts that it does not differ materially from other forms of exhaustion. 3d. Thermic fever, or sunstroke proper. From a considerable number of clinical histories, and from *thirty* original experiments in which heat-stroke—generally fatal—was induced upon the lower animals (mammals and birds) by confining them from 15 minutes to two hours in temperatures ranging from 110 to 180° F., and from a careful survey of all the physiological points involved—a survey including much literature seldom read among us—the author reaches the following theory of the disease, which we abbreviate from the text:—

"Excess of temperature is the sole efficient cause of sunstroke. The amount of moisture in the air, condition of the patient, race, acclimatization, temper-

ance, health, etc., influence only as they render the subject more or less capable of resisting heat by the natural method of self-cooling." (*Mem.* It is a well-observed fact, however, that to produce sunstroke a high temperature and a high dew-point are both required. Thus, on the arid plains of New Mexico, at a temperature of 110° F., a man may ride all day in the sun with comparative impunity, while in our Atlantic and Gulf cities, where the air is surcharged with moisture, sunstroke frequently occurs at a temperature of 90–95 F.) "The disease has more or less prodromes. In its full development the symptoms are intense fever; great nervous disturbance, unconsciousness, convulsions, paralysis, etc. In most cases death results from asphyxia, or from simultaneous failure of circulation and respiration. Cases of instant fatal syncope do occur, but only during active exercise. The direct rays of the sun are not required. The most obvious lesions determined by post-mortem examination are—great rigidity of the heart and a condition of the blood like that seen in low fevers. Experiments demonstrate that sunstroke may be produced in animals by natural or artificial heat, with the symptoms and lesions above named; also general rigidity of the muscles occurring quickly *after* death, dependent upon coagulation of the myosin or muscle-plasma, which occurs instantaneously at a blood temperature of 115° F. and at much lower temperatures when the muscles have been active. When the brain alone is heated, in mammals, to a temperature of 108° F., insensibility with or without convulsions follows, and death when 113° F. is reached; and this effect is not due to induced *congestion* of the brain, but to the direct effect of heat upon the *cerebrum*, the nerve-trunks sustaining a temperature of 125° F. without immediate injury to their conducting power. The life of the blood is not destroyed by any temperature reached in sunstroke; the amœboid movement of the white and the absorption power of the red corpuscles not being impaired; but the amount of oxygen in the blood is greatly lessened, from gradual asphyxia combined with abnormal consumption of O. There is no reason for believing that capillary thrombi are common in sunstroke. There is no specific poison developed in the blood; the deterioration of it is due to rapid tissue-changes induced by the sun, and the more or less complete arrest of excretion: this deterioration *is secondary to the nervous symptoms, not primary. If the heat be withdrawn* before it has produced permanent injury to the nervous system, blood, or tissues, the convulsions and unconsciousness are relieved, and the animal recovers."

Upon the basis of these propositions, which are very carefully argued, the author sets forth this postulate: "The nature of sunstroke is that of a fever, not dependent upon blood-poisoning but on heat, an ephemeral or irritative fever."

To accept this terminology, it is necessary to admit that all the processes of fever may at times be condensed into a few moments; moreover the declaration italicised above, that the blood changes are consecutive to the nervous symptoms, would seem to imply that some injury of the nature of shock was the prime factor in the disease.

The sequelæ of the disease are declared to be, commonly, headache, frequent vertigo, dyspeptic symptoms, and inability to bear exposure to the sun.

These symptoms generally pass away after a few or many months, but sometimes persist and are intensified. As often as they have been seen by the author to result in death, the autopsy has shown the lesions of chronic cerebral meningitis. In regard to treatment the author states the indications as now generally accepted. To reduce the heat of the blood by cold douches to the whole surface and by ice-rubbing, to arrest convulsions by hypodermic use of morphine and by chloroform, to supplement failing natural by artificial respiration, to meet indications of meningitis by leeches and blisters, and later by iodide and bromide of potassium. The book is nicely printed, but the illumination of the muslin cover is more than we require in a scientific treatise, and a departure from the ordinary good taste of the publishers.

THE MAGNETIC AND MINERAL SPRINGS OF MICHIGAN, to which is prefixed an Essay on the Climate of Michigan. By STILES KENNEDY, M.D. Wilmington, Del.: James & Webb, 1872. pp. 125.

WE had a taste of Dr. Kennedy's quality a year or more since in a remarkable pamphlet on Iodoform. He appears to maintain his identity in the present issue. When he is at home he lives at Newark, Del., but last year he became Resident Physician to the St. Louis Springs, Michigan. "This volume may therefore be looked upon as a medical report of my observations on the effects of the waters and climate of Michigan in disease. From the unqualified approval of the profession of a former attempt (Iodoform?) I have in this work adopted the clinical plan of demonstrating my views of therapeutics and practice regarding these waters, as being most satisfactory to all concerned." The author is a man of much reading, as appears from his many citations. We are not sure that we always comprehend him, but that may be our fault. *E. g.*, his remarks upon the "philogistic diathesis," the "acuticity of rheumatism," and his methods of rendering the "alimentary canal soluble," and "building up strong stomachal tissue," by the continued use of alkalies. He says an adviser must not be "influenced by his loco personæ," which we judge to be sound. He compares some of these waters to those of *Vichey* (another spelling is also, we believe, tolerated), and asserts that these are superior because *they* contain carbonic acid. In his paralytic cases, Dr. K. adds to these magnetic waters the use of an ascending galvanic current from a considerable number of "Smee cells" (60 in one case; in another was able "gradually to reduce it to 30"), with palpable advantage. They can get away with a good deal of electricity in Michigan.

There is an ingenious chapter designed to prove that there is no fever and ague in Michigan. This may be so, but we remember that the newspapers last year told us how Chief Justice Chase, after being cured of cerebral softening, had to move on to Bethesda, Wisconsin, since which, it is said, he takes his quinine at Narragansett pier.

There is also a vigorous onslaught upon the quacks who infest these springs, which is admirable.

There are also, in addition to strictly scientific discussions, several pleasing full-page wood-cuts or lithographs of hotels, architecture, principally renaissance, some railroad and other maps, and a gazetteer of towns and industries in Michigan.

We are satisfied that, however much there may be in the book, there is more in the author, which the unqualified approval of the profession would at some time bring out.

THE PROFESSIONS IN NEW YORK STATE.—According to the Federal census returns, the State of New York, with a population of 4,382,000 in 1870, has 6,000 clergymen, about 1,000 journalists, 7,000 doctors, and 6,000 lawyers.

Correspondence.

THE AMERICAN MEDICAL ASSOCIATION.

To the Editor of the Medical Record.

Sir—An editorial leader in the July 1st Number of the Record is so replete with thoughts that have occurred to the minds of those members of the profession in the United States who justly feel a patriotic pride in the achievements and glory of American Medicine, that a further ventilation of the subject may be indulged in without offering an apology to the reader.

When the American Medical Association was organized, a little more than twenty years ago, it is fair to presume that its objects were praiseworthy, and that the members of the profession of the New Worlds ought in its inauguration to lay broad and deep the foundations on which themselves and future laborers might with confidence deposit the results of their research, and to which they might refer or appeal in all matters relating to the subjects to which their lives were devoted.

It was the laudable purpose of its founders to establish an Association which, like many in the Old World, should be the repository and faithful custodian of our progress—should truly reflect the condition of medicine, and should record the improvements and discoveries due to American genius, talent, labor, and skill. The members from their respective States were expected to be willing and zealous co-workers, and thus, by degrees, they finally hoped to rear an edifice, which, though not so venerable for its age, might, by its more modern sprightliness of development, compare favorably with those renowned Associations that have indissolubly linked with them the name and fame of the scientific magnates of Europe.

That the Association has fallen from these sublime aims has already become apparent even to the non-professional observer; and no medical man that has watched the (shall we say?) deliberations of this body for the past five years, can help feeling a sense of shame in the last degree humiliating, nor is he able to rid himself of a sincere solicitude as to the capacity of the Association for realizing the hopes of its founders.

To be sure, committees are annually appointed to report on such and such subjects the year following, but when the reports are called for, the response is like that of "calling spirits from the vasty deep;" and in lieu of which, private professional wrangles, that ought to have been settled by the local societies where they arise, are thrust before the Association for adjustment, and thus valuable time is frittered away, and nothing of permanent value to the profession accomplished.

We are speaking in general terms, and perhaps a little too loosely, for the Record leaves nothing unsaid respecting the frivolousness of the discussions, and the general tumult and disorder which prevail at these meetings. It might, however, have added to the serio-comic aspect of the case, by picturing the grim joke perpetrated upon innocent delegates from remote sections, whose aspirations are concentrated on the importance of the occasion—who leave their homes and practice prepared for grave and weighty measures, "bearing their blushing honors thick upon them," and find upon returning to the wearisome and monotonous routine of daily professional life, that they have listened to "empty words signifying nothing," or, more unfortunately still, have been inveigled into a series of gastronomic gymnastics that have upset their digestion for the next six weeks to come.

Now, all this can be improved, and we, in common with the Record, appeal to the good sense of the profession to reclaim the American Medical Association from the low estate into which it has descended. Its Code of Ethics needs, to say the least of it, a discreet revision, and many amendments will suggest themselves to such a body of representative men as can be easily found in this country.

A. B. Snell, M.D.

Shreveport, La.

SMALL-POX STATISTICS.

Bureau of Records of Vital Statistics,
September, 1872.

To the Editor of the Medical Record.

Sir—Doubtless most of your readers, in common with myself, have been afforded much gratification from an examination of the very interesting statistics of small-pox presented by Dr. McDonald, in your issue of September 1st. But, apart from their intrinsic value as statistics, they fail, if I may be allowed to say so, to prove so conclusively as the Doctor would infer, that in our population "the foreign element, more than the native, manifests the vigor of constitution necessary to preserve life through the course of an exhaustive disease like small-pox."

Dr. McDonald's first communication upon this subject was founded upon the statistics of 2,526 patients treated in the Small-Pox Hospital during *the year* 1871. According to *those* figures the native mortality exceeded the foreign by 11 per cent. In commenting upon those statistics I took the liberty of suggesting that a re-examination of his figures, taking age into account, might materially alter the Doctor's conclusions, in view of the facts that some 50 per cent. of deaths from small-pox occur among children less than ten years of age; that a very large proportion of such children are native born, and that the fatality of the disease in early childhood is well known to be relatively enormous.

Instead, however, of thus analyzing the 2,526 cases of the year 1871, Dr. McDonald now reviews the statistics of "1,474 patients who had passed through the hospital during the first five months of *the present year;*" and discovering among persons over ten years old a difference of 12 per cent. mortality in favor of those of foreign birth, remarks: "According to my first paper the difference was but 11 per cent.; so that the exclusion of children from the computation, so far from diminishing the contrast, as Dr. Russel predicted it would, actually makes it the more conspicuous." Now I respectfully object to any such inference. It is a well-established law in statistics that the most reliable conclusions are to be derived from the largest accumulation of facts; therefore, the 2,526 of 1871 was a better figure to deal with than the 1,474 of 1872; and if treated as was suggested, could by no possibility have furnished any such result as the above.

Moreover, the constant fluctuations of contagious diseases from year to year, not only in respect to peculiarity of type, but also in respect to greater or less prevalence among different ages and classes of the population, are too well recognized to require more than mention. If, therefore, there was found during the first five months of 1872 a difference of 12 per cent. in favor of the foreign cases of small-pox, it by no means follows that among a much larger number in 1871 as great a difference, or even a greater, may not have existed in favor of the native element.

The returns made to this Bureau from the Small-

Pox Hospital for the first five months of the present year, show a mortality from small-pox of 52 per cent. upon the 251 cases given by Dr. McDonald as less than ten years old. Six-sevenths of these deaths were of native-born children. From this it may, I think, be safely assumed that about six-sevenths of the 251 cases were also native born. This calculation would give a proportion of altogether 539 native and 935 foreign cases, and a mortality of 39 per cent. native and 20 per cent. foreign (all ages included)—or a difference of 19 per cent. Now, Dr. McDonald has shown that by excluding children under ten, the difference is reduced to 12 per cent. Would it not be reasonable, therefore, to suppose that the 11 per cent. in favor of the foreign cases of 1871, would, if similarly treated, be reduced in a like proportion; in fact, to so small a figure as to justify my former language, by "depriving the Doctor's statistics of any alarming significance?"

Even his statistics, embracing over twenty years, exhibit an average difference in mortality of but 10 per cent. between *all* foreign and *all* native cases received into the hospital; which difference would most assuredly, as I have shown, be very materially diminished, and perhaps entirely neutralized, were comparisons confined to the proper class.

I must acknowledge, Mr. Editor, that I have no other means of substantiating my opinion than by analogical reasoning, as the figures at my disposal relate entirely to mortality. But until more substantial arguments than those drawn from five months' statistics are brought to bear upon this question, I cannot admit that Dr. McDonald's views have a more positive value than my own.

Yours, very respectfully,
CHAS. P. RUSSEL.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from September 5, 1872, *to September* 18, 1872, *inclusive.*

SIMMONS, JAS., Surgeon.—By S. O. 137, Department of the Gulf, September 2, 1872, granted leave of absence for thirty days.

HASSON, A. B., Surgeon.—By S. O. 169, Department of the East, September 6, 1872, assigned to duty at Fort Trumbull, Conn.

STERNBERG, G. M., Assistant Surgeon.—By S. O. 137, C. S., Department of the Gulf, assigned to temporary charge of Medical Director's office during absence of Medical Director.

WOLVERTON, W. D., Assistant Surgeon.—By S. O. 178, Department of Dakota, September 6, 1872, assigned to duty at Fort Abercrombie, D. T.

HUNTINGTON, D. L., Assistant Surgeon.—By S. O. 69, C. S., Department of the East, relieved from duty at Fort Trumbull, Conn., and to report in person at these Headquarters.

DEGRAW, C. S., Assistant Surgeon.—By S. O. 94, Department of the Lakes, September 13, 1872, granted leave of absence for fifteen days, and permission to apply for five days' extension.

BROOKE, JNO., Assistant Surgeon.—By S. O. 105, Department of the Columbia, August 31, 1872, granted leave of absence for thirty days, with permission to apply for an extension of thirty days.

CARVALLO, C., Assistant Surgeon.—By S. O. 89, Department of the Lakes, September 5, 1872, assigned to duty at Fort Gratiot, Mich.

GARDNER, W. H., Assistant Surgeon.—By S. O. 205, War Department, A. G. O., September 3, 1872, relieved from duty in Department of the East, and to report in person to the Commanding General, Department of the Missouri, for assignment.

VICKERY, R. S., Assistant Surgeon.—By S. O. 205, War Department, A. G. O., C. S., relieved from duty in District of New Mexico, to proceed to New York City, and upon arrival report by letter to the Surgeon-General.

MOFFATT, P., Assistant Surgeon.—By S. O. 205, War Department, A. G. O., C. S., relieved from duty at Newport Barracks, Ky., and to report in person to the Commanding General, Department of the Missouri, for assignment.

DELANY, A. S., Assistant Surgeon.—By S. O. 205, War Department, A. G. O., C. S., relieved from duty in District of New Mexico, to proceed to New York City, and upon arrival report by letter to the Surgeon-General.

COWDRAY, S. G., Assistant Surgeon.—By S. O. 144, Department of the Missouri, September 3, 1872, granted leave of absence for thirty days, with permission to apply for an extension of twenty days, to take effect during October, 1872.

DICKSON, J. M., Assistant Surgeon.—By S. O. 154, Department of the Platte, September 6, 1872, granted leave of absence for thirty days; and by S. O. 86, Military Division of the Missouri, September 14, 1872, leave extended thirty days.

Medical Items and News.

THE CLIMATE OF HONOLULU.—Rev. William R. Bliss, correspondent of the *New York Observer* (himself an invalid), writes that invalids afflicted with a pulmonary disease, with bronchitis, trachitis, or any defect in the respiratory organs, especially with a chronic cough, should never go to Honolulu. The reason for this is the *trade-wind.* This wind is the most conspicuous feature in the climate. It comes from the northeast, with a varying force and a steady regularity; having blown through an average of 298 days yearly during the past ten years. It commences to blow between nine and ten o'clock in the morning. It is a cool wind (much cooler than the trade-wind of the West Indies), and always brings with it rain upon the highlands. It is often so cool as to reduce the sensible temperature of the air much below the thermometrical temperature. This wind is connected with sudden meteorological changes, which are very troublesome to an invalid. During the eight months commencing with October and ending with May,—the period in which California physicians send their bad patients to Honolulu, perchance to be sent back by the undertakers,—the lowest average range of the thermometer in the city is generally 70°, and the highest 82°, noted at sunrise and at 2 o'clock in the afternoon, near the sea-level. The extreme range is from 60° to 88°.

The average rain-fall in the city is about fifty inches, distributed irregularly through the year. In 1870 it was 59.51 inches. In 1871 it was 40.09 inches. The porous lava soil absorbs the rain quickly, leaving no pools of muddy water standing a long time in the streets. This granulated soil forms the main sewerage system of the city, and does the work well, except when the wind is from the south, at which time the invalid may be forcibly reminded of Coleridge's "two-and-seventy stenches" at Cologne. The south

wind is a disagreeable wind to an invalid, because it brings an inelastic, languid atmosphere, which seems to be deficient in oxygen; causing a depressing feeling, relaxing the system, and dulling the appetite. One must go through a process of acclimation to become indifferent to the influences of these southerly winds. In closing, Mr. Bliss speaks of many splendid days in the climate of Honolulu; mild sunny days, to be enjoyed by those who are in a *good physical and mental condition;* and the balmy air is what the long-suffering, discouraged invalid needs.

Death of the English Medical Director-General.—Sir Andrew Smith, Director-General of the English Army Medical Department, died recently. He was a Scotchman, spent a great portion of his life in South Africa, and, among books on that colony, his "Illustrations of the Zoology of Southern Africa" is well known.

Deaths from Lightning.—During the months of July and August, 1872, *thirty-six* persons were killed by lightning in the Northern and Eastern States of our country. During the ten days succeeding July 3, no less than fifteen persons were killed by this means in these States. A writer in *Appletons' Journal*, September 9, 1872, truthfully remarks that "a succession of three railroad accidents, in each of which five persons had been killed, would have horrified the community; but these fifteen deaths by lightning seem to have attracted very little attention. From the report of Boudin, presented to the Academy of Sciences in 1864, we learn that in France, during twenty-nine years, an average of seventy-seven persons lost their lives, and 232 were injured, per annum. In Mecklenburg it was found that one person was killed out of every 247,200 inhabitants. Now, on English railroads, the death-rate is one for every 1,256,290 passengers; and in France the death-rate is one for every 1,955,555 passengers."

Brigham Hall.—The Report of the Resident Physician of this Hospital for the Insane, for the year 1871, gives the subjoined exhibit: The number of patients admitted was 48; of these 12 were recent or acute cases, while 33 were of a chronic type. There were discharged improved, 19; the number of deaths was 6. Since the opening of the Hospital in 1855, there have been 816 patients received; 252 of whom were discharged recovered; 172 improved; 175 unimproved; 73 were inebriates, and 74 died. The whole number of those discharged and those who have died is 746; leaving 70 patients under care at the beginning of the year 1872. The medical officers are as follows: *Resident Physician*, George Cook, M.D.; *Consulting Physician*, Harvey Jewett, M.D.; *Treasurer*, George Cook, M.D.

Mt. Sinai Hospital, N. Y.—This new and commodious Hospital on Lexington Avenue, N. Y., was formally opened on the 29th of May. Gov. Hoffman presided and made a short address.

A Temperance Movement in France.—According to *Le Courrier Médicale*, a number of persons, moved by the sad revelations of the increase of the vice of drunkenness in France, have instituted a society under the name of the *Association Française contre l'abus des boissons Alcoholiques*, the object in view being to oppose the progressive increase of this vice, to encourage the formation of societies in the different Departments with the same object, to establish lectures on the damages of intemperance, to encourage the publication of pamphlets, manuals, almanacs, etc., to encourage the substitution, as beverages, of coffee, tea, *natural* wines, cider and beer in place of spirits, to obtain, if possible, increased taxation on spirits, and the relief of duties paid upon the less potent articles, to consider the measures legalized against public drunkenness, and to publish from time to time reports of its proceedings.

The Pole-Cat a Centipede (?).—To what species does the pole-cat belong? Ans. *Centipede?*

Chancre.—Why not call a chancre an epithelial cancer? Vid. "*epithaliuric.*"

New York Coroners' Statistics.—The statistics of the Board of Coroners of New York for 1871 are as follows: Infants found dead in the rivers, streets, alleys, etc., 126; accidents of all kinds, including riot, explosion, and heat cases, 851; deaths by drowning, 179; suicide, 108; homicide, 42; infanticide, 5; abortion, 2; judicial hanging, 1.—Total, 1,314. Concerning suicides, the nationalities were as follows: Germany, 34; United States, 29; Ireland, 19; England, 14; France, 5; Scotland, 2; Denmark, 2; Canada, 2; Cuba, 1.—Total, 108. Ages as follows: Under twenty, 3; under thirty, 29; under forty, 34; under fifty, 23; under sixty, 13; under seventy, 4; under eighty, 1; under ninety, 1. Means employed: Hanging, 19; shooting, 22; cutting throat, 18; poisons, 38; drowning, 7; jumping from windows, 4.

The poisons used were: Paris green in 13 cases; morphine, 2; chloroform, 3; prussic acid, 3; opium, 1; ether, 1; carbolic acid, 2; laudanum, 5; strychnine, 1; arsenic, 2; narcotic poison, 5.—Total, 38.

New York Police Treated in 1871.—The police surgeons treated from April 1st, 1871, to April 1st, 1872, 2,981 cases of sickness in the force, which lost 17,630 days of service—5,083¼ days less than the year before. Number of candidates examined, 768; number passed, 315; number rejected, 418, and number of cases treated at station-houses, 4,858.

Quarantine Establishment of New York.—*Commissioners of Quarantine for* 1872. Richard Schell, Samuel Barton, A. N. Bell, M.D.; *Secretary of the Board*, Francis E. Howard; office, 2 Exchange Court. *Health Officer of the Port*, S. Oakley Vanderpoel, M.D. *First Deputy and Executive Officer*, Jacob S. Mosher, M.D.; *Second Deputy*, T. J. Thompson, M.D.

West Virginia State Medical Society.—At the annual meeting held at Wheeling, June 6th, 7th, and 8th, the following officers were elected for the ensuing year: *President*, Dr. R. H. Cummings; *1st Vice-President*, Dr. Roemer; *2d Vice-President*, Dr. R. P. Davis; *3d Vice-President*, Dr. Moore. *Secretary*, Dr. William Dent; *Treasurer*, Dr. J. C. Hupp. *Board of Censors*, Drs. Bates, Young, Hildreth, Allen, Davis, and Sanford.

Honor to a Medical Man.—The title of LL.D. was recently conferred upon Professor Samuel G. Armor, of Long Island College Hospital, by Franklin College, Ohio.

Triplets.—Mrs. George Crowell, of Anaka, Minn., having given birth to three boys on the 1st of July, the citizens of that place have given her two corner lots and one hundred dollars. This is encouraging for Mrs. Crowell, who, by the way, has a singularly appropriate name. We hope that there are a few more lots in that vicinity to be given for like services to the commonwealth.

Buffalo State Insane Asylum, N. Y.—The *American Journal of Insanity* for July, 1872, has the history and description of this new asylum, with a fine lithograph-

ic cut. The foundation of the centre building, connecting corridors, and two of the buildings of one wing have been laid, and the work is being rapidly pushed forward. The State appropriations thus far have been $300,000. The land (two hundred acres) donated by the city of Buffalo is situated some three miles from the centre of the city, and is bounded on the north by the Scajaquada Creek, a tributary of the Niagara River; on the south by Forest Avenue; on the east by the line of Elmwood Avenue, and on the west by the City Park. Upon Forest Avenue it has a frontage of some three thousand feet. The Asylum grounds were laid out by Mr. Fred. Law Olmsted.

Jamaica, W. I.—The new medical bill now before the Legislature opens the island of Jamaica to persons holding American diplomas in medicine and surgery.

Appointments, etc.—Dr. J. R. Baudrey, Physician to the St. Vincent Asylum of St. Louis, has received an appointment to the Chair of Psychological Medicine in the Missouri Medical College. Dr. John H. Callender, Superintendent of the Tennessee Asylum, is to lecture upon "Insanity; its Causes and Treatment," in the Medical Department of the University of Nashville. Dr. C. H. Hughes has resigned the position of Superintendent of the Missouri State Asylum. He will give his special attention to the treatment of diseases of the nervous system, in St. Louis. Dr. T. A. Howard is appointed to the Superintendency made vacant by the resignation of Dr. Hughes.—*American Journal of Insanity.*

Boston University.—Dr. John Ordronaux is appointed one of the Faculty in the Law School of the Boston University.

Association of Medical Superintendents.—The 27th Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane will be held in Baltimore, on the 4th Monday of May, 1873.

Modern Giants.—The race of giants is not extinct; and Barnum might make a fortune by bringing over the Goshen family from Turkey in Asia, who are descendants of the Anakims, of Palestine. Colonel Ruth Goshen, thirty-three years old, one of this family, now residing in Algonquin, Illinois, born among the hills of Palestine, and seven feet and eight inches in height, recently entered the office of the *Scientific American*. He is the fifteenth and last child (the baby) of a family of fifteen—ten sons and five daughters—sired by a patriarch now ninety years old, living in the valley of Damascus, and by occupation a coffee-planter. This venerable sire weighs at the present time 520 pounds avoirdupois, and his wife, aged 67, weighs 560 pounds. The entire family are living, and not one of them weighs less than 500 pounds. The oldest son weighs 630 pounds, and the youngest (the Colonel) outstripping them all, weighs 670 pounds. Not one of the family is less than seven feet in height. Ruth was a Colonel in the Austrian army in 1859, and a colonel Commanding in the Mexican army at the battle of Pueblo, May 5, 1862, in which the Mexicans were victorious. His father at one time resided at Leeds, England, but returned to Turkey in 1845. The Colonel married in Leipsic, Germany, a woman weighing 190 pounds and five feet nine inches in height; the union has been blessed with two sons, who give promise of rivalling their father in stature. He is a finely proportioned man; walks with a firm and elastic step; is as straight as an arrow, and has coal-black eyes, hair, and moustache.

Negro Mortality at the South.—The mortuary records of the city of Charleston, S. C., commencing with the year 1866, are as follows: The entire population in 1866 may be estimated at from 35,000 to 40,000, and in 1870 the United States census shows a total of 48,956. The average surplus of "blacks and colored" over the whites during the six years may be placed at 4,000. The total number of deaths in each year is as follows:

	1866.	1867.	1868.	1869.	1870.	1871.
White.....	.607	462	390	458	539	714
Black.....	1,164	879	818	918	1,075	956

The year 1871 was a yellow-fever, or sickly season, and as such years are much more fatal to the whites, it can scarcely be placed on a level with the rest. The relative proportion of deaths thus far in 1872 is the same as in the first five years.

Of the entire number of deaths—9,005 in all—7,711 are natives of South Carolina; 428 are natives of other States; 866 are natives of foreign countries.

The relative mortality of children under five years of age :—

	1866.	1867.	1868.	1869.	1870.	1871.
White.....	212	319	136	181	203	191
Black.....	392	623	372	461	405	415

The Charleston correspondent of the *Nation* writes that of all the great contrasts between the past and the present in the South, not one has struck him more forcibly than the seeming death of negro children. It is not so noticeable in the cities and towns; but in the country it might be supposed that some new Herod had inaugurated a slaughter of innocents.

Utah Bismuth.—The discovery of bismuth in Utah, 200 miles south of Salt Lake City, is important. The mines of Saxony and Bohemia, from whence the supply now comes, are nearly exhausted.

Japan Tea.—The first Japan tea of any consequence received in this country was in 1859–60, when 365,300 pounds were imported. The quantity imported in 1871-2 has already reached 11,482,173 pounds, or about thirty per cent. of all the tea imported.

Croton Water.—The average quantity of water supplied to the citizens of New York City is 65,000,000 gallons daily. Eighty or ninety millions could be supplied were none allowed to flow over the dam. The total storage capacity of the three reservoirs is 1,058,000,000; equivalent to sixteen days' supply. The aggregate capacity of the fifteen reservoirs, which Mr. Craven, Chief Engineer of the Croton Department, indicates as practicable, would amount to 67,000,000,000 gallons, or three years' supply to the city of New York. The area which is drained by the Croton River and its tributaries, or, in other words, the Croton water-shed, measures 338.82 square miles, with an elevation of from 250 to 600 feet above the sea-level. One of the reservoirs planned by Mr. Craven, at Boyd's Corner, in Putnam County, is nearly completed. The dam is placed across the west branch of the Croton, 23¾ miles from the Croton dam; it is 650 feet long, and 64 feet high, and the reservoir, when completed, will cover an area of 303 acres. It will hold 3,369,000,000 gallons of water, a quantity sufficient to supply the city 55 days, with a population of one million; or through the longest drought which is liable to occur. The present supply of water is very liberal, amounting to 65 gallons per head daily. Imperial Rome received, however, from 300 to 340 gallons per head daily.

The Opium Trade.—During the twelve months ending June 30, 1871, there were imported into the United

States 5,041,936 ounces of opium, worth $1,926,915 in gold and during the year ending June 30, 1870, there were imported 4,073,744 ounces, worth $1,776,908, making an increase of twenty-four per cent. in quantity and eight per cent. in value. According to the above figures, opium in 1870 was worth, at the Custom-house, about seventy cents a pound, and in 1871 about sixty-one cents a pound, a decrease in price of thirteen per cent.

The Penis.—In a Reprint from the New York *Medical Journal*, June, 1872, Alex. W. Stein, M.D., presents, with excellent drawings, a clear synopsis of the views at present entertained upon "The Histology and Physiology of the Penis."

Massachusetts Medical Society.—Twenty-two members of the Society died during the past year, and fifty-eight new Fellows were admitted. The total fund of the organization amounts to $30,420.17. The total membership amounts to about twelve hundred. At the anniversary meeting held in Boston, June 4 and 5, Dr. George C. Shattuck was elected President for the ensuing year.

Brown University.—The late William S. Rogers, of Boston, left the sum of $50,000 to found a Professorship of Chemistry in Brown University, Providence, R. I., to be known as the "Newport Rogers Professorship."

A New Medical College.—The first session of the College of Physicians and Surgeons (Medical Department of the Syracuse University), Syracuse, New York, will commence October 3, 1872. E. B. Stevens, M.D., Chief Editor of the *Cincinnati Lancet and Observer*, is Professor of Materia Medica, Therapeutics, and Botany.

The Canada Medical Record.—This is the title of a new monthly journal of medicine and surgery, published in Montreal, and edited by Francis W. Campbell, M.A., M.D, L.R.C.P., formerly connected with the late *Canada Medical Journal*. The first (August) number is creditably gotten up, and in the style adopted bears a resemblance somewhat to our own, "being," the editor remarks, "that of the most successful Medical Journals both in Europe and the United States."

Chicago Relief Fund.—Walter Hay, M.D., Secretary of the late Medical Relief Committee (*Chicago Medical Journal*, August, 1872), acknowledges the receipt of $134.51 from New York physicians, through Dr. S. T. Hubbard, Treasurer, and also of $15 from physicians of Lansingburgh, N. Y., through Dr. Geo. H. Hubbard. The total amount forwarded by the New York Executive Committee, and received by the Chicago Relief Committee, was $5,934.51.

New York Ophthalmic and Aural Institute.—Dr. Charles S. Turnbull, son of Dr. Turnbull, of Philadelphia, has been appointed Resident Assistant Surgeon in this flourishing institution, founded by Professor Herman Knapp, M.D.

Vienna.—This city, with its 800,000 inhabitants, has eight hundred physicians.

Northwestern Medical and Surgical Journal.—With the first number of the third volume (July, 1872) of this Minnesota journal, Drs. H. C. Hand, of St. Paul, and H. H. Kimball, of Minneapolis, assume the editorial chairs and the publication of the enterprise, in place of Alex. J. Stone, M.D., resigned. As this is the only medical periodical now published in Minnesota, Wisconsin, or Iowa, the new editors feel "that they have the ground, the material, and the necessity for the permanent prosperity of a journal at their command."

Lithotomy and Lithotrity.—Sir William Fergusson, in his Address delivered at the opening of the Section of Surgery, at the Annual Meeting of the British Medical Association, in Birmingham, August, 1872, stated that he had the honor of laying before the present meeting of this Association between three and four hundred specimens of stone in the bladder, which had been dealt with by his own hands. He exhibited the produce of between three hundred and thirty and three hundred and fifty cases of stone personally treated by himself; about two hundred by lithotomy, the rest by lithotrity. The aggregate of stones removed amounted to nearly five hundred in number. Specimens were shown from a few grains in weight to nine ounces; from one solitary stone in the bladder to forty-two. The first was removed in 1832, and the last was extracted in 1872. A savage-looking mulberry calculus dwelt in its vesical home for forty years.

Ovariotomy.—The following words were uttered by Sir William Fergusson, at the late meeting of the British Medical Association, in Birmingham: "When ovariotomy was first propounded, it was little else than a theory—a rash visionary scheme for notoriety; but, thanks to the well-directed efforts of Clay, Brown, Wells, Keith, and a host of others, the proceeding is a well-established fact, which ranks among the best and safest efforts in surgery to save human life."

It would have been pleasing to Americans if Sir William had given merited credit to such names as McDowell, the first operator; Atlee, Peaslee, Emmet, Thomas, Storer, etc.

Freer and Hodgson, of Birmingham, England.—In the Addresses on Surgery, etc., at the recent meeting of the British Medical Association, by Oliver Pemberton and Alfred Baker, Surgeons to Birmingham General Hospital, tribute was paid to the late George Freer and Joseph Hodgson, of Birmingham; the former, the first to tie successfully the external iliac artery for femoral aneurism, as suggested by Abernethy (October 4, 1806); the latter (Treatise on Diseases of Arteries and Veins, London, 1815), paving the way to a clearer perception of the pathology of arteries and veins than had existed since the days of Hunter.

The Author of "Holloway's Pills," etc.—A middle-class asylum, to cost from $350,000 to $500,000, will be erected at his own expense, at Virginia Water, England, by Mr. Holloway, of pill and ointment notoriety.

Death of Dr. Curran.—Henry Curran, L.R.C.P.I., of Dublin, died in August, from the effects of typhoid fever. This successful teacher was, for many years previous to his death, connected with the Carmichael School of Medicine. He was one of the physicians to the Mater Misericordiæ Hospital, and the Black Hall Street Dispensary.

Removals and Changes among New York Physicians.—Since May 1, 1871, seventy-nine regular physicians have removed from this city, Brooklyn, and the environs, to unknown residences; to known residences, forty-three.—*N. Y. Med. Register* for 1872.

New York Foundling Asylum.—This asylum, temporarily located at No. 3 Washington Square (north), was opened Nov. 1, 1869. It is in charge of the Sisters of Charity, and has no endowments but the willing gifts of the benevolent. Up to Oct. 1, 1871, 2,560 infants had been left, and of these 1,377 were received between

Oct. 1, 1870, and Oct. 1, 1871. The new hospital will be located on a block of ground between Sixty-eighth and Sixty-ninth streets and Third and Lexington avenues. *Consulting Physician*—J. S. Thebaud, M.D. *Attending Physician*—James B. Reynolds, M.D.

New York City Asylum for the Insane, Ward's Island.—This new building, opened for patients Dec. 13, 1871, was erected by the Commissioners of Charities and Correction at a cost of $800,000, and has accommodation for about 400 patients. *Resident Physician*—Gonzales Echeverria, M.D. *House Physicians*—Drs. D. McC. Eddy and J. H. Haydon.

Bellevue Hospital, N. Y.—Provision is made for 1,200 beds. The admission of patients, from 10 A.M. to 3 P.M., is readily procurable upon the recommendation of a physician. From five to six hundred births occur annually in the lying-in wards, of which one-third are illegitimate. Number of patients in hospital Jan. 1, 1872, 779; admissions during the year, 6,359; births during the year, 376; total number treated during year, 7,514; discharged or relieved, 5,753; deaths, 1,102; remaining Dec. 31, 1871, 659.

House Staff, April 1, 1872.—*House Physicians*—Drs. A. A. Smith, W. H. Katzenbach, F. P. Kinnicutt. *Senior Assistants*—Drs. M. B. Early, J. F. Corrigan, H. S. Swan. *Junior Assistants*—Drs. D. M. McMasters, L. Bolton Bangs, J. C. Lindsly. *House Surgeons*—Drs. A. L Ranney, J. W. Mitchell, T. A. McBride. *Senior Assistants*—Drs. W. B. Dunning, W. F. Fiuhrer, G. A. Van Wagenen. *Junior Assistants*—Drs. W. T. Bull, J. D. Griffith, T. H. Burchard—*Provisional Junior Assistants*—Drs. M. H. Forrest, J. L. Perry, Leroy T. Brooks, W. H. Farrington, M. Figueira. *Examining Physician*—Dr. P. B. Wyckoff. *Asst. Examining Physician*—Dr. C. Ferriberry. *Ambulance Surgeons*—Drs. C. H. Greenough, J. M. Delgade.

Presbyterian Hospital, N. Y.—This new institution, on Madison avenue, between Seventieth and Seventy-first streets, will be opened early in October. As completed, it will accommodate about 100 patients. When finished, it will have accommodations for 300 patients. *Consulting Board.—Physicians*—Drs. Alonzo Clark, Oliver White. *Surgeons*—Drs. Alfred C. Post, George A. Peters. *Visiting Board.—Physicians*—Drs. A. Brayton Ball, Alexander Hadden, Geo. G. Wheelock, G. H. Wynkoop, Edward Seguin, W. De F. Day. *Surgeons*—Drs. Gurdon Buck, John J. Crane, Samuel B. Ward, L. De Forest Woodruff, Thos. T. Sabine, D. M. Stimson. *Pathologist*—Dr. Charles S. Bull.

German Hospital, Newark, N. J.—Two hundred and four patients were admitted to this hospital, of 35 beds, during 1871; 156 were males, and 48 females; 163 were discharged cured or improved; 26 died. *Medical and Surgical Staff*—Drs. Julius Bruck, A. Herzog, Fridolin Ill., Chas. J. Kipp, Max Kuchler, Ch. F. J. Lehibach, F. Lehmacher, M. Tissot, Chas. Vogler, Anton Zehnder. *House Surgeon*—Dr. Charles F. Webner.

New York Dispensaries.—The number of free patients treated in the subjoined dispensaries in New York City during the year 1871 is as follows:—

New York Dispensary, cor. White and Centre sts.	35,348
Northern Dispensary, Christopher st. and Waverley pl	18,217
Northwestern Dispensary, cor. 36th st. and 9th av	13,421
German Dispensary, 8 Third st	16,121
Demilt Dispensary, Second av. and E. 23d st	26,654
Eastern Dispensary, 57 Essex st., cor. Grand	25,880
North-Eastern Dispensary, 222 E. 59th st. near Third av	19,703
Bureau of Surgical and Medical Relief at Bellevue Hospital for Out-door Poor	17,700
Harlem Dispensary, Fourth av., bet. 126th and 127th sts	3,632
Central Dispensary, 934 Eighth av	5,708
Dispensary and Infirmary, Church of the Holy Trinity, Madison av., cor. 42d st	2,402
Union Dispensary, 246 E. 13th st	6,044
N. Y. Eye and Ear Infirmary, Second av., cor. 13th st	9,287
Ophthalmic and Aural Institute, 46 E. 12th st	3,112
Manhattan Eye and Ear Hospital, 233 E. 34th st.	1,958
N. Y. Infirmary for Women and Children, 128 Second av	5,001
Western Dispensary for Women and Children, 249 Ninth av	1,596
N. Y. Free Dispensary for Sick Children, 406 E. 15th st	1,962
N. Y. Orthopædic Dispensary, 945 Sixth av	935
N. Y. Tumor Dispensary, 101 E. 30th st., cor. Fourth av	42
Dental Infirmary, cor. 21st st. and B'way	5,128
Total number treated	219,851

Estimating the population at one million of inhabitants (a high estimate), more than one-fifth are *pauper* patients, or *would-be* ones—or 21.98 per cent. Besides these, thousands are gratuitously treated in the various hospitals and at college cliniques.

Dispensaries in Brooklyn, N. Y.—The number of poor patients treated, in 1871, in the following Dispensaries, etc., was as follows:—

Brooklyn Central Dispensary, 312 Raymond st.	4,672
Brooklyn Dispensary and Ear Infirmary, 11 Tillary st	8,106
Dispensary of the Church Charity Foundation Out-door Dept. of St. John's Hospital, 1,702 Fulton av	1,450
Brooklyn Orthopædic Infirmary, Raymond st. near De Kalb av. (Brooklyn City Hospital)	857
Williamsburg Dispensary, 161 Fourth st., E. D.	7,642
Brooklyn Eye and Ear Hospital, 208 Washington st	1,937
Total number treated	24,664

Being 6.16 per cent. of the whole population.

Worcester City Hospital, Mass.—By the will of the late George Jaques, of Worcester, Mass., the sum of a quarter of a million of dollars was bequeathed to the city of Worcester for the new Free City Hospital.

University of Heidelberg.—An American clergyman, writing from Heidelberg to the *Christian Intelligencer*, speaks of meeting at the hotel Schreider the eldest son of Professor R. O. Doremus, who is qualifying himself in chemistry, by spending two years in the laboratory of the celebrated Bunsen. There are now at this university about 1,000 students and 150 professors.

In the castle of Heidelberg are the famous wine-vessels, the little Tun and the great Tun, the former of which holds 60,000, and the latter 280,000 bottles of wine. It has been filled only three times in the last century.

The Hassler Expedition.—Prof. Agassiz and party have gathered 100,000 valuable specimens of mineralogy, botany, and natural history on the cruise of the steamer Hassler.

Medical Staff of the U. S. Navy.—The following changes for the six months ending July 1, 1872, is noted in the Blue Book, together with some that have occurred since the publication of the register:—Medical Directors: Jonathan M. Foltz and David Harlan have been placed on the retired list, placing James C. Palmer at the head of the list, and creating him Surgeon-General. Surgeons Marius Duvall and Joseph Wilson have been promoted to Medical Directors. Surgeon John S. Pitcher dropped from the register. Passed Assistant Surgeons Joseph Hogg, Geo. R. Brush, and Edmund C. Ver Meulen have been promoted to Surgeons. Passed Assistant Surgeons Edward B. Bingham and Lewis S. Pitcher dropped from the register. Assistant Surgeon Melancthon L. Ruth has been promoted to a Passed Assistant Surgeon. The following have been added to the Assistant Surgeons: Remus C. Parsons, Benjamin F. Rogers, Thomas H. Streets, Henry P. Harvey, Manley H. Simmons, Chas. A Seigfried, John F. Bransford, and Jos. M. R. Simmons.

Mr. F. C. Skey, C.B.F.R.S., the noted English surgeon, died Aug. 15, 1872.

Death of an Aged Maine-ite.—Mr. John Groves died at Portland, Maine, recently, at the age of one hundred and thirteen years. He was born in the island of Martinique, came to Maine while a boy, before the Revolutionary war.

Death of a Medical Bishop.—Rt. Rev. George Upfold, M.D., D.D., LL.D., Bishop of Indiana, died August 26th, 1872. He was born near Guilford, Surrey, England, in 1796, came to the United States in 1802, and graduated at Union College in 1814. In 1817 he received his medical diploma from the College of Physicians and Surgeons of the City of New York.

Resections of the Maxillary Bones.—A handsome reprint of Dr. D. H. Goodwillie's practical paper on "Resections of the Maxillary Bones without External Incision" has come to hand. The substance of the paper was read at the June meeting of the Medical Society of New York.

American Medical Association.—The triennial list of permanent members will be published this year. Permanent members who have not paid their assessment will please notice: "Any permanent member who shall fail to pay his annual dues for *three successive years*, unless absent from the country, shall be dropped from the roll of Permanent Members."

(Signed) Wm. B. Atkinson,
Permanent Secretary.

Medical journals please copy.

Medico-Legal Society, New York.—A. O. Kellogg, M.D., of the Hudson River State Hospital, Poughkeepsie, N. Y., read a paper at the stated meeting of this Society Sept. 12th, 1872, on "Epilepsy and its Relations to Insanity and Cases of Doubtful Responsibility before Judicial Tribunals, with remarks on Expert Testimony." Nominations for officers for the ensuing year, to be voted for at the anniversary meeting in October, followed.

British Medical Association.—The next meeting of this Association will be held at Bradford, September, 1873. Belfast is the place chosen for 1874 Dr. James Prescott Joule is the President elect. The tenth annual meeting of the British Pharmaceutical Conference will also be held in Bradford next year.

University of Berlin.—Professor Virchow has been appointed Dean of the Medical Faculty in the University of Berlin.

Death of the Late British Director-General.—Sir Andrew Smith, M.D., K.C.B., late Director-General English Army Medical Department, died Aug. 11, 1872, in Brompton, aged 75 years. He was the author of many scientific papers on the Origin and History of Bushmen, and a work on "Illustrations of the Zoology of South Africa."

Agassiz.—Prof. Agassiz has been elected one of the eight Foreign Associate Members of the French Academy of Sciences, to fill the vacancy caused by the death of Sir Roderick Murchison.

Paris Faculty of Medicine.—Dr. Brown-Séquard has resigned the chair of "Comparative and Experimental" Pathology in the Paris Faculty of Medicine.

The Art of Swimming.—Chauncey F. Perkins, M.D., LL.D., of Erie, Pa. (*Med. and Surg. Reporter*, Aug. 31, 1872), contributes an extended and readable essay on "The Art of Swimming, Considered as a means of Safety, Hygiene, and Pleasure," filling twenty-three columns of that journal.

The University Hospital, Philadelphia.—The land in West Philadelphia, bounded by 34th and 36th, and Spruce and Pine streets, on which the new University Hospital is to be erected, is now being graded. Two hundred thousand dollars has been subscribed for the hospital, besides a grant of $100,000 which was obtained from the State Legislature.

Philadelphia Small-Pox Statistics.—According to the *Medical and Surgical Reporter* of Aug. 17, 1872, the total number of deaths, from the time the small-pox made its appearance in September, 1871, up to August 1, 1872, was 4,393, divided between the sexes as follows: males, 2,498; females, 1,895. Since July 1, 1872, there has been about only one new case daily.

Professor Parvin.—*The American Practitioner* of September, 1872, announces that Prof Theophilus Parvin, M.D., LL.D., has resigned the Chair of Gynæcology in the University of Louisville, Kentucky.

Death of Dr. John Bell.—This old and eminent Philadelphia physician died August 24, 1872. He was at one time an editor of a Philadelphia journal, President of the American Colonization Society, and for one session Professor of the Theory and Practice of Medicine in the Ohio Medical College. He was also one of the authors of "Stokes and Bell's Practice," a standard work in its day, and the writer of a prize essay on "The Influence of Alcohol on the Production of Tuberculosis."

New Publications.

Books Received.

The Science and Practice of Medicine. By William Aitken, M.D. Edinburgh; Prof. Pathology in the Army Medical School, etc. With Additions by Meredith Clymer, M.D. (Univ. Penn.). In two volumes. Phila.: Lindsay & Blakiston. 1872.

Medical Electricity: A Manual for Students, etc. By William White, M.D., Prof. in the New York Med. College for Women. New York: S. R. Wells. 1872.

Epidemic Cerebro-Spinal Meningitis; with an Appendix on some Points in the Causes of the Disease as shown by the History of the Present Epidemic. By Meredith Clymer, M.D. (Univ. Penn.), Fellow of College of Physicians, Phila., etc. Phila.: Lindsay & Blakiston. 1872.

The Journal of the Gynæcological Society of Boston. Vol. vi. Boston: James Campbell. 1872.

Original Communications.

CASE OF RETENTION OF URINE,

CAUSED BY A

SINGLE DISEASED KIDNEY, SITUATED IN THE PELVIC CAVITY,

FOR THE RELIEF OF WHICH RECTAL PUNCTURE WAS DONE, THE TROCAR PASSING TO THE RIGHT OF THE BLADDER AND ENTERING THE KIDNEY.

DEATH ON THE FOURTH DAY AFTER THE OPERATION.—AUTOPSY.—REMARKS.

By J. W. S. GOULEY, M.D.,

[SURGEON TO BELLEVUE HOSPITAL, NEW YORK.]

Peter McG., a healthy-looking, muscular man, aged 24, was admitted to Bellevue Hospital, Sept. 20, 1870. Three days before, he thought he was in good health, but in the evening was seized with pain in the hypogastric region, and a friend, supposing him to be suffering from colic, gave him some gin and advised his lying prone; from these means he obtained relief. On the following day he went out, but was seized with severe pain, and soon returned and summoned a medical gentleman, who, finding the patient suffering from retention of urine, introduced a catheter, but no water flowing, he thought he had failed to enter the bladder. Several other gentlemen saw the case and used instruments, but since no urine escaped by the catheter, they, also, thought the bladder had not been reached. In the evening of the second day—the patient being still unrelieved—the operation for puncture of the bladder through the rectum was done. Not much urine flowed, and the canula was at once removed. On the afternoon of the third day he was sent to the Hospital, where I first saw him. There was a fluctuating hypogastric tumor, dull under percussion and giving the idea of a distended bladder. A No. 15 bulbous bougie was passed into the bladder and met no obstruction in its course; a No. 10 silver catheter was then introduced, and eight ounces of urine were drawn off, but the hypogastric enlargement did not subside. By rotating the catheter to the left, nothing abnormal was detected, but on the right it came in contact with a resisting object which seemed to have pushed that wall of the bladder almost to the median line.

I expressed the opinion that the tumor was extra-vesical, and had encroached upon the cavity of the bladder to the extent of giving rise to the urgent symptoms of retention. An elastic catheter was retained, the distal extremity plugged, and the stopper ordered to be removed every two hours. The patient though partially relieved grew worse—peritonitis having set in—and died on the third day after admission to the hospital.

Autopsy nine hours after death.

Thoracic viscera normal. Liver slightly enlarged and fatty. Spleen enlarged.

General peritonitis, most marked in the pelvis where the organs were glued together. All the intestines but the rectum having been carefully removed, no kidneys were found in the lumbar regions, and no renal arteries could be detected in the usual place. Within the pelvis, and rising above the brim, between the sacrum and bladder, more to the right than to the left, was a tumor the size of a child's head, filled with fluid. This tumor was accidentally cut into, and, as the fluid (urine) escaped, it partially collapsed. The dissection necessary for its removal revealed that it derived its supply of blood from the middle sacral artery, which was much enlarged. There was a single large vein emerging from the tumor, and emptying into the ascending cava. A healthy undistended ureter was traced from the hilus of this single and abnormally placed diseased kidney to the bladder. The tumor, the rectum, and the bladder were carefully removed in mass, the urethra being severed under the pubic arch. The bladder presented no morbid appearance other than a few punctate spots of congestion in its mucous membrane, and there was no evidence of any puncture in its lower fundus or anywhere else. The rectum being laid open from behind, its parietes were found greatly thickened. Through its anterior wall, two and a half inches from the anus, there was a punctured wound which was traced into the substance of the kidney and its distended pelvis; the trocar having passed to the right of the bladder without wounding it.

Remarks.—The notes of this case, though incomplete, do not detract from its great interest and from the lesson it teaches. It is extremely instructive anatomically, physiologically, and pathologically, but it will here be considered chiefly in its surgical aspects.* There was not only retention of urine in the bladder, but also in the pelvis of the kidney, which latter was caused by compression of the short ureter, partly by the tumor itself and partly by the distended bladder. Whenever the patient changed his position to the prone, the tumor would be thrown forward and out of the pelvic cavity, relief of the bladder following, the pressure upon the ureter would be removed, the urine would again gush into the bladder, and, as this filled up, retention of urine in the renal pelvis would again occur.

It is the frequent recurrence, for months, perhaps years, of retention of urine in the bladder which probably gave rise to this extreme distension of the pelvis of the kidney. Had the patient often assumed the prone position he would doubtless have obtained more relief, and perhaps his kidney would have remained normal, but its situation in the pelvic excavation was never suspected. Anatomists have occasionally found one or both kidneys in this locality, but, so far as I know, this anomalous position of the organ has never caused retention, and the case may, in this respect, be considered unique. It is not, therefore, to be wondered at that we all failed to appreciate the true nature of the case until the autopsy came in aid.

A gentleman present at the autopsy asked, "What are the signs by which such a 'mal-position' of the kidney can be discovered, especially when, as in the case in point, there is retention of urine?" My answer was,—"Taking the case under consideration for an illustration, the signs would be:—1st, pain in the hypogastric and sacral regions, also in the perinæum and rectum, with a sense of weight and perhaps tenesmus, even after successful catheterism of the bladder; 2d, absence of pain in the lumbar regions; 3d, dulness in the hypogastric region; 4th, absence of renal dulness in the lumbar regions on careful auscultatory percussion; 5th, no subsidence of the hypogastric tumor after successful evacuative catheterism of the bladder."

The important lesson learned in this case is, that the attempted operation of rectal puncture of the bladder—which here gave rise to fatal peritonitis—was resorted to under the impression that the whole trouble was retention of urine in the bladder from obstruction of the urethra, and this conclusion seems to have been arrived at without proper exploration of that canal. Had a bul-

* The acting House Surgeon, Dr. Schuyler, found it impossible to obtain a complete history of this case, and was allowed but little time, comparatively, for the autopsy, the friends being desirous of removing the body at once.]

bous bougie been passed, as the first step of mechanical exploration, the canal would have been found permeable to the largest instruments; puncture of the bladder would not have been entertained for a moment, and possibly a correct diagnosis would have been made.

There is one more point to be considered in this case. It will be remembered that the hydronephrosis was quite extensive after death, as if the relief of the bladder had at last failed to remove the obstruction of the ureter, due latterly to compression by the kidney which was becoming more and more distended, and if the patient had not died in consequence of the puncture, he would have surely died from rupture of the renal pelvis or from suppression of urine. Let us suppose that a correct diagnosis be made, what would then be the treatment in such an instance? If another like case—but without previous interference—were to present itself, and relief could not be obtained by postural treatment, I would endeavor to establish a direct communication between the distended pelvis of the kidney and the bladder, by passing into the bladder, per urethram, a No. 14 curved metallic catheter, open at its vesical extremity, turning the point against the bulging wall of the bladder, holding the instrument firmly in position, and thrusting in an articulated trocar of proper length; after the withdrawal of the trocar and on the appearance of urine, insinuating, as rapidly as possible, a No. 10 or 11 gum catheter, also open at both ends, through the metallic instrument, which I would then remove, secure the soft catheter in position for a week, and draw off some urine at regular intervals until the subsidence of the watery tumor. After a week the gum instrument might be changed every second day, over a whalebone guide of double length, until the fistulous track should be lined with mucous membrane derived from the pelvis of the kidney and from the bladder. Such a device is, I think, worth trying for the relief of what must certainly end fatally without it.

56 West Thirty-eighth Street, New York, Oct., 1872.

CLINICAL RESEARCHES IN ELECTRO-SURGERY.

By A. D. ROCKWELL, M.D., and GEO. M. BEARD, M.D.

II.

Recurrent fibroid tumor of years' standing.—Repeated electrolyzations without etherization and attended with trifling pain.—Arrest of growth.—Gradual decrease in the size of the tumor.

Case XIV.—Mrs. P., a lady of middle age, was directed to us by Dr. F. Winston, in February, 1871.

On examination, we found under the right ear a large tumor, soft and movable, and equal in size to the closed fist. The enlargement was of the recurring fibroid character, entirely painless, but most unsightly in appearance. The patient first observed the growth some ten years since, when its size was barely appreciable. It gradually enlarged until it attained the size of an ordinary hen's egg, and was removed by the late Dr. Cheesman.

A few months subsequently it made its appearance a second time, and steadily enlarged, until at the expiration of three years its size was somewhat greater than when the first operation was performed.

It was again removed by Dr. Willard Parker, but in course of time returned. The patient was now unwilling to have the operation by the knife repeated, and for seven years the tumor slowly increased to the size above stated.

To avoid any possibility of exciting an action in the tumor that might render it truly malignant in character, we at first made use only of external galvanization.

After a dozen applications no change could be perceived in its outward conformation; but that the treatment had not been without some effect was manifested from the fact, that the head could now be turned in any direction without causing the disagreeable and sometimes painful sensations that had formerly followed pressure of the deep portion of the growth on the underlying tissues.

We now decided to try the ordinary method of electrolysis, and accordingly introduced, an inch into the tumor, a needle insulated to within half an inch of its point. This application, alternating with external galvanization, was repeated some twelve times during the course of two months, and resulted in a very decided alteration in the shape, as well as a marked diminution in the size of the growth. After each operation a large quantity of free hydrogen gas escaped through the opening made by the needle, followed by a slight flow of blood.

At this time two needles were used—the second one of platinum, and connected with the positive pole. It should be stated that previously only twelve zinc carbon cells had been used, and the current allowed to pass but ten minutes. We now increased the cells to twenty, and permitted the needles to remain some fifteen minutes; but when they were withdrawn, neither gas nor blood escaped, and yet it was absolutely certain that the current had been passing every moment, and with power greater than in previous operations.

In a few hours the tumor and tissues surrounding it became greatly swollen, accompanied by very considerable pain.

The pain and swelling were relieved by a poppy poultice, but a slight discharge continued through the months of July and August, during which time treatment was intermitted. In September, when the patient returned to the city, the discharge, which had ceased two weeks previously, had evidently resulted in a still further reduction of the tumor.

The treatment was resumed, and continued at intervals during the past winter and spring. The effect has been a slow but constant decrease in size, until now it is about one-third its original size.

At one time during an interval in the treatment the patient observed, in a portion of the tumor to which the needles had not been applied, a projection which rapidly enlarged until it was one-third of an inch in diameter, and extended downward into the healthy tissue for more than an inch. A single needle was introduced into this unwelcome addition, and a mild current allowed to pass for ten minutes. The process of absorption was excited, and in two weeks this protuberance completely disappeared. It is interesting to note in this description, that while the growth was slowly but steadily enlarging before the use of needles, it has not, since the treatment by electrolysis was begun, shown the slightest disposition to increase in those parts actually influenced by the current—although at one time several months elapsed between the operations.

While the above case cannot be cited as a brilliant result of electrolytic treatment, it is of exceeding interest, and has afforded many useful hints that have been of value in other cases.

The pain of introducing the needles was trivial; and the electrolytic action, even when it was very intense, produced little or no sensation; consequently it was at no time necessary to use chloroform, and the treatment was as readily borne as if the applications were merely external. The impression very generally prevailing, that elec-

trolyzation of morbid growths must be excruciatingly painful, is not confirmed by the test of experience. The above and other cases of like character illustrate that fibroid tumors may be thus treated with but little pain; goitre, and some erectile tumors as well, are not acutely susceptible to the pain of electrolysis.

Cases of scirrhus seem to be more sensitive to the chemical action of the current; and it is frequently necessary to etherize the patient, although in other cases local anæsthesia is sufficient. In several instances the introduction of the needles and the action of the current were borne with but little more fortitude than it is necessary to exercise in some external applications.

If, in the case related, it is found necessary to remove the tumor at once by the process of undermining, profound anæsthesia will have to be produced; since, without it, the consequent disintegration of the underlying sound tissue would cause intense pain.

Cystic tumor of the submaxillary region: three operations; rapid healing with slight disfigurement. Successful result.

Case XV.—Miss ——, a young lady in her teens, was sent to us March 25th 1872, by Dr. Wm. W. Reese. The patient was of a fragile constitution, and had become debilitated by confinement in the stifling air of a manufactory where she was employed. For one year she had been troubled with a tumor on the submaxillary region of the left side, that was at first supposed to be simply an enlarged gland. It did not, however, yield to the usual treatment that various physicians and surgeons had given her, and at the time we saw it, it was about the size of an English walnut, and was apparently encysted. Lancinating pains of a tolerably severe character were sometimes felt in and near the growth.

Careful examination made it pretty clear that the enlargement was cystic; that soft substance was inside of it, although the walls were quite hard.—March 27th, with the assistance of Drs. Reeves and Hyde, we electrolyzed a portion of the growth, and found that it was really cystic and contained a dark cheesy substance. The patient was fully etherized during the operation, which lasted forty minutes. Large and long needles were employed and 16 zinc carbon cells.

The operation was followed for two days by the usual irritative fever, but by no other unpleasant result. There was considerable sloughing, but the bulk of the growth remained as a large unsightly mass. April 14th we again operated, by *working up the base* of the tumor, undermining it and separating it from the surrounding healthy tissue. Dr. A. B. Crosby assisted at the operation, and enucleated a portion of the mass before the needles were inserted. The irritative fever was slighter than after the previous operation. An ulcer 1½ inch in length and half an inch in depth remained—the surface presenting, as usual after electrolytic operations, a charred appearance which at first alarmed the patient. The subsequent healing was, in the judgment of all the surgeons, surprisingly rapid and satisfactory. Dr. Crosby, in proper time, brought the edges together and thus expedited the reparative process, so that at the end of a month only a trifling scar remained. At one of these operations the parenchymatous hemorrhage was excellently controlled by the action of the current, and no other styptic was required. The patient had now positively improved in her general health, and was free from any sign of the disease. It was hoped by all parties that she would hear no more from the tumor. It had been suspected at the close of the operation that a small portion of the growth remained, but it was not deemed advisable to protract the operation.

Very soon, pains of quite a severe character began to be felt just beneath the skin in the region of the sublingual gland: then followed swelling, and in a few weeks a tumor as large as a horse-chestnut, of the same appearance and feel as the previous growth. We decided to operate again, this time with absolute thoroughness; the same surgeons being present, and also Dr. Mann. Dr. Crosby made an incision and enucleated the growth, the operation being completed by electrolyzation with large needles as before.

The work was thoroughly done; the base was thoroughly electrolyzed. During the operation, a branch of the facial artery was severed by the needle; this was tied by Dr. Crosby. The wound was treated as before and with the same result—rapid and satisfactory healing, that has been permanent. The scar disfigures but slightly, while the patient has improved in her general health, and at the date of writing weighs much more than at the time of the operation.

Large and painful epithelioma of the upper lip of several months' standing.—Removal by electrolysis and satisfactory healing.

Case XVI.—Miss ——, aged 20, was brought to us by Dr. Corey, Oct. 23, 1871, to be treated for an epithelioma of the upper lip that had distressed her for several months. At this time the growth extended from the median line to the left corner of the lip, being about one inch in diameter and one-half an inch in length. The pain of the growth was at times very great, especially when exposed to the cold; the disfigurement was annoying, and there was an evident tendency to quite rapid increase. At the base, on the inner surface of the lip and especially at the corner, hard nodules were easily detected by the finger. With the assistance of Dr. Corey, and in the presence of a number of physicians, we electrolyzed the upper portion of the growth with five small needles, three connected with the negative and two with the positive pole. Full anæsthesia was used, and the operation lasted twenty minutes. The needles were inserted directly into the body of the tumor and not around the base. The method of working up the base, we had not at that time begun to employ. The soft parts of the tumor in the vicinity of the negative pole decomposed with rapidity. A yellowish foam was developed, which, forcing its way underneath the scab that covered the tumor, gradually lifted it up and completely detached it from the body of the growth.

The parts presented the usual charred appearance after the operation, but there was little or no pain, either in the tumor or in the vicinity. There was, however, considerable irritative fever, and the face was somewhat swollen. In the course of a week, the portion of the diseased part that had been electrolyzed began to contract, and near the median line healthy tissue appeared. The lower part, that was little affected by the needles, remained as before. Nov. 9, we again operated with four negative and one positive needles with the same number of cells (16 zinc carbon) and for about the same time. Dr. Corey administered the anæsthetic, and Drs. Armor, Caldwell, and others were present. This operation was more thoroughly performed than the previous one, but the needles were not inserted into the nodules or the inner surface, but only into the superficial parts of the growth. No bad result followed; and by Nov. 27th the tumor had contracted to one-third of its original size and was healing rapidly. The healing process continued until scarcely any trace of the disease remained. The healing was almost perfect; there was an entirely natural skin in the region where the tumor had formerly existed, and the only cicatrix was at the corner of the mouth. Twitches of pain have been felt in the vicinity of the scar, especially on exposure to

cold, giving rise to the suspicion that possibly that portion of the growth was not thoroughly treated.

It is now one year since the patient was treated, and the recovery may be regarded as most satisfactory. In reference to this case it may be remarked:—

1st. If the diseased mass had been thoroughly separated from the surrounding healthy tissues by inserting large needles, one operation would have been sufficient, and the cure would probably have been absolute.

This was the first case of the kind that we had treated, and we had not then employed the method of working up the base and had not devised the long, sharp, double-edged needle which we now employ in the electrolyzation of large growths.

2d. There was scarcely any hemorrhage or other unpleasant symptoms during or after the operation, excepting the irritative fever of which we have spoken.

3d. The scar was probably less than if the knife had been employed.

Scirrhus of the left breast in a woman aged 45.—Complete and instant relief from excruciating pain, and in the course of four days, disappearance of one-half the growth, from one electrolytic operation.

Case XVII. Mrs. ——, aged about 45, an inmate of Bellevue Hospital, was affected with cancer of the left breast.

The main portion of the scirrhus was the size of an ordinary orange, and extending into the axilla were a number of cancerous nodules of considerable size.

The surrounding and intervening tissue was as hard and unyielding as the tumor itself. The process of suppuration was beginning to manifest itself, and for several weeks the patient had suffered night and day the most excruciating pain through the diseased parts. The first operation was performed in one of the wards of the hospital, in the presence of Prof. Frank Hamilton (who had requested us to operate by the electrolytic method) and his private class. The patient having been etherized, we introduced deeply into the upper portion of the breast three gilded needles, and with a fourth transfixed the largest of the axillary nodules. The positive pole (a large moist sponge) was applied to the under portion of the gland. No very decided change was manifest in the appearance of the mass during the operation other than some puffing up of the skin, due to the disengaged hydrogen; but very soon after it began to decrease in size, and in one week not only had all the hardness of the surrounding tissue and all the axillary enlargements entirely disappeared, but the mammary tumor had decreased in size at least one-half. The most grateful relief the patient experienced, however, was the complete and seemingly permanent dissipation of pain. In ten days we again operated, and by the same method, in the amphitheatre and before Dr. Hamilton and the regular class of the College. On the following day the patient felt so comfortable that she left the hospital, and in a week's time presented herself for examination, when it was found that there had been a still further decrease in the size of the tumor. She still remained entirely free from pain, and was delighted with the results of treatment. Most unfortunately, we now lost sight of the patient. She never returned, and thus an opportunity of witnessing the final results in this case of scirrhus, in which the immediate effects of electrolysis were so remarkable, was forever lost.

The probabilities are that the patient was satisfied with the result of treatment and did not feel it necessary to continue it.

Scirrhus of two years' standing involving the whole right breast.—Pain relieved by external treatment, but electrolyzation with a strong current does not appreciably affect the growth.

Case XVIII.—Mrs. D., a lady of middle age, observed during the winter of 1869 a very slight enlargement on the right breast.

Its growth was exceedingly slow until June of the following year, when it rapidly increased in size, and in two months it had involved the whole breast.

She first consulted in this city Dr. Wm. H. Van Buren, who pronounced it a case of scirrhus and referred her to us for electrolytic treatment.

We found the tumor to be remarkably hard, involving two of the axillary glands.

The patient had for months suffered very great pain, while the arm of the affected side was so lame that it was impossible to lift it more than a little way from the side. External applications relieved the pain very decidedly, and improved the condition of the arm so that she was able to use it quite readily.

On Dec. 4th, 1871, in the presence of Drs. Nott and Metcalfe, we etherized the patient and operated by introducing into the upper portion of the tumor four three-cornered needles, insulated to within one inch of the points. The current was from 36 zinc carbon cells, and in tension sufficient to deflect the galvanometer some fifty degrees. The needles remained in position twenty minutes; and although the current was constantly passing, the effect on the substance of the growth where the needles pierced was barely appreciable, while the skin covered by the large sponge of the positive pole was well-nigh blistered.

The needles utterly failed, and we were forced to content ourselves with the relief afforded by external applications, not attempting the undermining or destructive process.

Scirrhus of the breast, in a married lady, of four months' standing; very severe pain; very great relief of pain by external galvanization and electrolyzation by working up the base.—Death from exhaustion.

Case XIX.—Margaret D., aged 35, was referred to us October 10th, 1871, by Drs. Skene and Corey, of the Female Department of Long Island College Hospital. —She was affected with a tumor of the left breast that was manifestly scirrhus. The entire mamma was hard, quite firm, and presented, in spots, a reddish and angry appearance. It was four months since the attention of the patient had been called to the growth, and probably much longer than that since its first appearance. For several weeks the pain had been terrible and almost constant, and it was this fact more than any apprehension of the nature of the malady that had brought her to the hospital.

The face of the patient was considerably cachectic, and her condition in general was one of debility.

We at once began treatment by localized faradization (external). The applications were made with wet sponges, and the séances continued about ten minutes. After the second application the pain diminished, and after further treatments ceased almost entirely.

This relief continued for six weeks or more, varying slightly at intervals. External galvanization, localized in the same manner, was next resorted to, with apparently even greater effect than the faradization.

The tumor, however, did not perceptibly diminish in size, and therefore we began to try electrolysis, at first with an insulated needle, connected with the negative pole, the positive being applied by a sponge on the surface of the tumor. The comparatively slight pain caused by the operation was borne without an anæsthetic. We may here remark, that the pain of introducing a needle is sometimes greater than that of the subsequent action of the current on the deeper tissues,

and for that reason we have sometimes used local anæsthesia by ether spray, and, what is more convenient still, *carbolic acid*. A mixture first suggested to us by our assistant, Dr. I. H. Sterling, composed of carbolic acid one part and sulphuric ether two parts, applied to the skin, will cause a circumscribed anæsthesia lasting for perhaps about ten minutes. By this extremely simple method anæsthesia may be restricted to a space one-eighth of an inch in diameter. As the skin offers the chief resistance to the introduction of the needle, and is more abundantly supplied with nerves than the deeper tissues, it is easy to understand that by this local and superficial anæsthesia the pain, and what is oftentimes worse, the *dread* of the introduction of needle, can be reduced to a minimum. The only effect of the electrolyzation several times repeated was to cause a sloughing near the spot where the needle was inserted. The patient remained mostly free from pain, but the body of the growth refused to diminish.

Just before the needle was used, the patient was brought before the Kings Co. Medical Society, and there examined by a large number of physicians and surgeons; the opinion was unanimous that the case was one of scirrhus.

By request of Dr. Geo. K. Smith, of St. Peter's Hospital, where the patient was staying, we now resolved to try more thorough treatment, and on November 14, 1871, the patient was fully anæsthetized by Dr. Corey, and three negative and three positive needles were inserted *around the base* of the upper part of the growth, in such a way as to surround that portion of the tumor and separate it from the healthy tissue.

This was the first time that we employed this method, which we subsequently denominated—*working up the base*.

Drs. Armor, Skene, Bunker, and other physicians and surgeons were present. The operation lasted half an hour. It was followed by some irritative fever and by a sloughing of the parts; the patient rallied, however, to such an extent that she was able to leave the Hospital of St. Peter's, where she had been confined, and to walk to her home.

November 27, hemorrhage appeared from some artery, and the patient lost a number of ounces of blood. She suffered, however, but little pain, and continued her housework. Subsequently, we operated by the same method in the Hospital of St. Peter's. Drs. Spier, Homisten, Hutton, and others were present, and assisted in the etherization. The usual sloughing followed, until the entire body of the growth was removed; completely detached from the surrounding parts. The base of the part first operated on had healed up almost entirely.

The patient went to her home in the city. She suffered little or no pain, but was manifestly growing feeble, and, April 22, she died of exhaustion. Up to the day of her death she suffered very little pain.

The interesting features in the above case—which may be regarded as one of the worst manifestations of scirrhus of the breast—are that it was so quickly relieved of pain by electricity, however administered, and that this relief was so permanent; that the size of the tumor did not diminish under the treatment; that the working up of the base was followed by a very satisfactory healing; that this method was, however, adopted too late to prevent the constitutional infection; and finally, that the patient, even in her debility, bore without the trace of a shock severe and protracted operations.

In their relations to electro-therapeutics there would appear to be two general varieties of tumors of the breast; one variety in which all or nearly all the mamma is involved, and is very hard, firm and unyielding, the skin being tense, glossy, and indicating inflammation and induration. The case above described would come under that head. This variety is the more obstinate and unyielding; the pain may be relieved, as in the case above cited, but the tumors do not grow smaller under the action of the current; they can be diminished in size or removed only by actual destruction of the tissue.

In the other variety the tumor involves but a limited portion of the breast; the skin is not tense, but is soft and yielding, and of the natural color; the growth is felt as a nodule beneath the skin, and the pain is not usually so severe as in the other variety and the growth is much slower. This variety is the one that is most disposed to yield to electrical treatment. Not only is the pain relieved, but the tumors grow softer and smaller, and in some instances permanently disappear.

In other cases their advance is arrested by the treatment, so that they remain stationary for months or years.

Whether what we call, for convenience sake, and for clinical reasons, only two varieties, are really but different stages of one variety; whether the latter may sometimes come under the head of abscess, or of the atrophying cancer described by Billroth, these questions may be left to professed surgeons and pathologists.

Epithelial cancer in a lady aged 30, involving the rectum, vagina, and external parts. Eleven electrolytic operations remove the growths, alleviate pain, and modify very greatly the rapidity with which the disease subsequently reappears.

Case XX.—The wife of a physician, aged about 30, had for eight years of her married life suffered from what was supposed to be scirrhus of the rectum, which had been removed by ligatures at different times and by different surgeons.

About three years before we saw her, an epithelial cancer appeared at the entrance of the vagina; this gradually increased in size and protruded, until by Oct. 1871 it appeared to be about half as large as a cauliflower, and much resembled one in appearance. The discharge was very profuse and very offensive; the pain terrible and almost constant. The growth was evidently increasing, and only with difficulty could the patient walk about the house.

A more distressing case of disease of any kind we had never seen. After each removal of the mass by the ligature, it would spring up almost before the sight and become larger than before. There was about it a rankness, a fierceness, a malignity, quite unusual. Like rampant weeds in rich soil, the more it was cut off, the faster it grew. Escharotics of all kinds, as well as condurango, had been tried, the latter remedy seeming to do injury.

The galvano-cautery had been suggested by Dr. E. R. Peaslee, whom the patient consulted, and Dr. Byrne had intended to give it a trial, but deferred the operation in order to experiment with condurango. We began treatment with external galvanization in order to relieve the pain. The first treatment accomplished nothing: the third treatment we connected an insulated rectal electrode with one pole, while the positive, by means of a wet cloth, was gently passed over the very sensitive surface of the tumor.

The patient was relieved of pain for a whole night. Satisfied with the result, we now resolved to use the needles.

With the assistance of Dr. Rotton and the husband of the patient we operated eleven times, with intervals of two or three weeks between the séances. Full etherization has been obtained in each operation.

We used two, three, or four needles, according to circumstances, and both poles were inserted into the base of the growth.

The first operation, Oct. 20, which lasted twenty-five minutes, removed one-third of the growth; and by the end of the third operation, all the growth external to the orifice of the vagina was removed.

Far up in the vagina, the diseased portion could readily be detected, spreading out in all directions like a watermelon vine.

Nov. 15th, there were some evidences of a reappearance of the external growth in those parts that were not thoroughly electrized. Nov. 22d, operated again by electrolysis for half an hour.

Dec. 5th, operated again by electrolysis in connection with Dr. Byrne, who by the aid of his speculum applied the galvano-cautery to the portions of the growth in the vagina. Jan. 17th, again operated by the same method for 30 minutes. The external ulcer caused by the removal of the tumor had hitherto been about four inches long, three inches wide, and one inch in depth, extending from the middle of the labia beyond the anus on the right side.

This ulcer now began to heal at the edges and to contract. Jan. 6th, began the use of nitrate of silver, applied to the ulcer. Jan. 8th, the discharge which had come from the vagina was much diminished and the ulcer had contracted to half the original size. Jan. 21st, operated by electrolysis in the vagina chiefly.

March 24th, repeated the operations with long needles, in the vagina, on some ragged portions of the growth. We were now able to ascertain by digital examination that there was a pretty direct connection between the growth in the rectum and the one in the vagina; they seemed indeed to be extensions from a common centre.

The septum at the base of the tumor in the vagina was so thin, that we much feared a recto-vaginal fistula, and great care was necessary in operating, to preserve this delicate and partially disorganized tissue that separated the two canals. April 21, again operated by electrolysis.

Subsequently the actual cautery was once used, in the hope that perhaps it might cause a more thorough drying up of the profusely discharging surface in the vagina; but the results of its use were unsatisfactory. The febrile condition that followed was alarming, and the local pain was terrific for several days after the operation. Since that time no formal operation has been made on the patient. During the summer local applications of various kinds have been experimented with; among others, a mixture of iodine, iodide of potassium, and glycerine, which was employed at the suggestion of Dr. Byrne, and with good effect.

During the year the patient has taken cod-liver oil, and except by intervals has had a good appetite. Twice a severe and protracted attack of sciatica has been brought on, apparently by exposure to cold.

At the date of writing the patient is confined to her bed, and is somewhat hysterical, but suffers comparatively little pain. During the summer the external part of the growth has gradually reappeared, but there is no difficulty in urination or defecation; and hence we conclude that the portion in the rectum has not greatly enlarged, and at the last examination the condition of the vagina was not seriously altered. We have all along feared that the disease would extend to the uterus, but examinations made at different times gave no evidence of involvement of that organ.

The operations were performed with a zinc-carbon battery of 18 cells, freshly charged.

The constringing power of the current was observed at both poles, but most decidedly at the positive. After each operation the surface presented a dark and somewhat charred appearance, as though it had been slightly burned. No large artery was severed during the operations, hence it was not necessary to use either the ligature or persulphate of iron.

We have given the above case in considerable detail, because of its great interest to surgeons, and especially because it illustrates most vividly, at once, the value and the limitations of electrolysis in malignant tumors. It illustrates:—

1. The power of electrolysis to control hemorrhage. The growth was so vascular that it bled quite profusely on the slightest touch, and yet, under the various and protracted electrolytic treatments to which it was subjected, the amount of blood lost was but a trifle.

2. The fact that the electrolytic treatment does not cause shock, to the extent that similar destruction of tissue by other methods would be likely to do. Twice, when chloroform was employed as an anæsthetic, the pulse acted badly and compelled us to suspend the operation sooner than we desired; but under etherization the needles were used for half an hour and longer without causing any shock. The stimulus of the current, with the occasional interruptions that are required, seemed, by reflex influence on the central nervous system, to act as an antidote to shock, as it has appeared to do in other cases.

3. Better healing, and later reappearance of the growth than after the operations by ligature and caustics. When removed by ligature this growth sprang up with great rapidity—in the course of a few days; even before the eyes, as it were, it seemed to enlarge, and to develop an offensive discharge; and the base never began to heal, even on the edges. After thorough electrization of the base, this growth not only did not show signs of recurrence for several weeks, but an external ulcer of large size entirely healed. With the internal ulcer on the feebly organized mucous tissues of the vagina we were not so successful.

4. The severe irritative fever that sometimes follows electrolysis.

After all the operations, the patient was confined to her bed for several days, and was more or less distressed by inflammation and swelling, not only on the edges of the ulcer, but at some distance down the nates and through the labia. The swelling of the labia was so great that difficulty and pain were experienced in passing water. It should be noted, however, that after the operations with the galvanic cautery and the actual cautery, the irritative fever and the surrounding inflammation were much more decided and distressing, and for that reason we returned to electrolysis.

5. The utter inability of even the most thorough and repeated electrolyzations of the base, to permanently eradicate the growth in those parts where it was *connected with the mucous membrane*. Although *the base was thoroughly worked up* by inserting the needles into the healthy tissue surrounding it so as to completely cut off all communication between the natural and the morbid parts, yet the disease extended *from the vagina*—to all appearances travelled bodily, according to Morgan's theory of cancer—until quite distant parts were attacked and became saturated with cancerous degeneration. The *external* portion of the growth connected with the perinæum and nates was apparently eradicated as thoroughly and as successfully as the cases of epithelioma of the lip, previously reported.

Take the case all in all, its long standing and wide extent, its excessively rapid growth and still more rapid reappearance after operation by ligature, the frequent repetition of long electrolyzations and the great temporary benefit resulting therefrom, it may probably be regarded as without a precedent in electro surgery.

DISEASE OF THE HEART COMPLICATING PREGNANCY AND LABOR.

REMARKS BEFORE THE KINGS CO. MEDICAL SOCIETY.

By C. L. MITCHELL, M.D.,

BROOKLYN, N. Y.

Mrs. ——, of Pennsylvania, aged 24 years, married about six months, came for advice because her menses had been arrested, and the means used by her physician to cause their return had been ineffectual. Her general health was good, her flesh moderately full and firm, and her manner and appearance denoted health and vigor. She had been troubled with heart disease from her infancy—hypertrophy with mitral regurgitation. Of late she had suffered severely from palpitation and shortness of breath, making it impossible for her to go up stairs, or walk otherwise than very slowly, without inducing such violent dyspnœa as would compel her to stand still until the action of the heart was quieted. A careful examination determined beyond question that she was about three months advanced in pregnancy.

Serious questions immediately arose as to the influences of the later stages of pregnancy, and of the hazards of labor thus complicated. The heart disease was so far advanced that constriction of the chest by dress or corsets could not be borne, and how will she be able to bear the still greater encroachments upon the capacity of the chest by an enlarged uterus? Already every active effort caused distressing dyspnœa, and what consequences were to be anticipated from the violent and uncontrollable throes of labor?

Early writers speak of a fatal syncope occurring in pregnancy and after labor which they were unable to explain. Burns, of the University of Glasgow, says he has more than once found a fatal syncope in pregnancy that he apprehended to be due to disease of the heart, although it presented no pathognomonic symptoms. Bedford states that he has seen but one instance of fatal syncope in pregnancy, and in that case it was well ascertained that disease of the heart existed previously. Hervieux mentions disease of the heart as a cause of death in puerperal women. Montgomery, Churchill, Meigs and Tanner do not refer to this complication. Cazeau dwells minutely and at length on almost every variety of disease that may complicate pregnancy, but disease of the heart is not named as one of them. As complicating labor, however, he thinks it is too often the cause of sudden death not to call for some special attention during labor, and relates a case in point. Dr. Simpson states that in a case of sudden death after the expulsion of the fœtus, in which the uterus was firmly contracted, the labor natural and without hemorrhage or other complication, the anterior history of the patient showed the probability of the existence of diseased heart. In another case the patient died suddenly about three hours after delivery, in which the symptoms before delivery indicated disease of the mitral valve. Dr. Elliot, in his "Obstetric Clinic," mentions the presence of organic disease of the heart as increasing the danger of delay, in a question of inducing premature labor in a case of deformed pelvis. Drs. Metcalfe and Barker, in consultation in this case, seem of the same opinion. Flint, Peacock, Bellingham, and others, in their works on diseases of the heart, make no reference to the aggravation of their symptoms by pregnancy, or to their presence augmenting the danger of confinement. Stokes enumerates twelve different maladies in which a knowledge of the heart's condition is important to their proper management, but among these pregnancy and labor are not mentioned.

By this reference to the writings of some of those who are looked to as authority by the profession, in those departments to which the mutual relations of heart disease and child-bearing belong, the conditions with which we are now occupied are, for the most part, barely recognized. Some do not name them. Others regard them as dangerous complications, but dismiss the subject without comment. A few have seen in them a serious condition, and suggested the necessity of meeting it by appropriate measures.

The negative part of this testimony is not without its value. If the reports of Dugés, Boivin, Velpeau, and others, which have supplied the records for obstetric statisticians for half a century, do not afford cases of mortality from this complication sufficient to attract attention, then its occurrence must be exceedingly rare, or the danger from it much less than we might anticipate, in the large majority of cases. This is an important conclusion, as it enables us, during the distressing and perilous dyspnœa of labor, to speak encouragingly to the patient. This immunity is no doubt due to the brief continuance of the pain, and the frequent recurrence of intervals of rest; the pain not continuing long enough, in many cases, to materially excite the heart's action.

The positive part of the testimony points to the fact, that although the large majority of cases may go on to a favorable termination, yet there are some which are attended with great danger, and which can be carried through safely only by the greatest skill and diligent watchfulness.

All the distressing symptoms of heart disease are aggravated by pregnancy: palpitation, difficult breathing, sleeplessness, loss of appetite, anæmia, and sense of suffocation and faintness, which are to be met by the careful management requisite in advanced hypertrophy of the heart. The digestion and nutrition should be maintained in as perfect condition as possible, and the blood enriched by carefully selected food and the administration of iron. Whatever excites increased or turbulent action of the heart should be avoided; as all quick movements, especially the sudden rising from a sitting posture, walking rapidly, ascending stairs, wearing closely fitting clothing, and whatever, in the experience of the patient, is found to induce palpitation. When the palpitation is habitual, recourse should be had to digitalis, cannabis, purgatives, etc. The tendency to syncope, which is apt to result in a fatal termination, should be guarded against by the measures for keeping up the general strength and quieting and regulating the heart's action already mentioned, and the use of stimulants, which should be always at hand ready for administration. Congestion of the lungs or of the kidneys, nervous irritability, and the various causes of suffering incidental to heart disease, should be sought for frequently without waiting for their prominent announcement by painful symptoms, and their fatal tendencies prevented by appropriate treatment.

Should these symptoms reach such a degree of aggravation as to endanger life, the question of premature delivery must be considered and decided. The propriety of resorting to premature delivery in certain cases of organic disease, with a view to saving life, has been positively determined in the affirmative. It is equally proper in the conditions we are considering. Johnson and Sinclair, in their work on Practical Midwifery, relate a case of pregnancy with suspected cardiac disease, in which the heart's action was excited to 150 beats in a minute, a rapidity that destroyed all distinction between the two sounds. The face became

swollen and livid, and the distress for breath was excessive. The fœtal heart having ceased to beat, the child was extracted with the crotchet, and within two hours the heart returned to its ordinary beat and healthy rhythm. In this case the mother's life was in imminent peril by the complication, and was to all appearance saved by prompt and efficient interference. If, therefore, during the progress of pregnancy, the life of the mother is jeopardized by aggravated heart symptoms, recourse to premature labor is not only justifiable but imperative, and should be the subject of daily consideration. Advanced heart disease is often the immediate cause of congestion of the brain, lungs, or kidneys, which, in pregnancy or labor, may at any time require immediate delivery, in order to save the life of the patient.

If the patient arrive in safety to the period of confinement, her fears and apprehensions should be allayed by assurances of a reasonable expectation of doing well. If the accoucheur is himself timid, or if unfamiliar with the methods of effective interference, he had better transfer the patient to another. If, in the progress of the labor, circumstances arise requiring immediate delivery, that end must be immediately effected by the measures appropriate to the stage of the labor at that moment. A delay of one or two minutes may make the difference of life or death to the patient, and the practitioner is to be blamed if he is not both prepared and watchful. "Syncope in labor, with heart complication, is greatly more urgent than hemorrhage or convulsions."

If violent palpitation is induced by the voluntary efforts during uterine pain, we have in anæsthetics the means of allaying this cause of excited action of the heart.

Several questions arise at this point needing decision. Is heart disease a bar to the use of anæsthetics? Which is the safer, ether or chloroform, in cardiac disease? Which of the two is preferable, when the object is to allay the involuntary action of the voluntary muscles in the throes of labor?

After enumerating the results of post-mortem examinations in cases of death from chloroform, Sansom says:—"In persons affected with valvular disease—in those in whom cardiac mischief is the result of acute rheumatism, for example—there is no special danger in the administration of chloroform."...."The danger is in those in whom there is incompetence of the heart's fibre, and the table of mortality shows this danger to be great."...."In fatty degeneration," he adds, "chloroform should not be administered."...."In the administration of chloroform to nearly 4,000 patients," says Dr. Snow, "the only instance of death was in a case of a weak and flabby heart." Dr. Hayward, of Boston, writes: "I have been in the habit of administering ether in cases where disease of the heart or lungs was present, and have had no cause to regret it." The testimony of other practitioners, whose extensive experience in hospital and private practice entitles them to confidence, confirms the position of Mr. Sansom, that *chloroform and ether can be used with a fair degree of safety in all diseases of the heart, except in the weak, flabby heart, and in fatty degeneration.*

The experiments and observations made by the committee of the Medical and Chirurgical Society of London definitely show that "chloroform, after a temporary stimulus, exerts a depressant action upon the heart. ....With ether it was found that sometimes, even after insensibility had been induced, the mercury in the hæmadynamometer stood higher than before the administration of the ether....With ether there was failure of the force of the circulation only when there was manifest failure of the breathing." Mr. Wakely, Surgeon to the Royal Free Hospital, made extensive series of experiments with ether and chloroform, aided by Mr. Erasmus Wilson and others, from which he concludes that "when there exists any disease of the heart....it would be highly imprudent to recommend the inhalation of the vapor of chloroform or of ether; ....but should the practitioner determine upon employing one of the two agents in question, assuredly the more dangerous of the two would be found in the vapor of chloroform." To this we may append the statement of Dr. Hayward, that he had administered ether in many such cases, and had never had cause to regret it. If in connection with this we add the statement of Dr. Snow, that chloroform sometimes paralyzes the heart, then our second question is answered, viz.: that *in cardiac disease ether is safer than chloroform.*

Violent action of the voluntary muscles excites the action of the heart if repeated in quick succession; and the action of the abdominal muscles in exciting palpitation is demonstrated by the well-known influence of strong efforts in the act of defecation. Of peristaltic actions and reflex actions, the latter are first subdued by an anæsthetic. Peristaltic actions continue with unabated force even after reflex actions are entirely subdued. It is only a question of degree of anæsthesia. Hence the uterine action may and does continue after the reflex action of the abdominal muscles is rendered impossible, and may continue of such power as of itself to be able to accomplish the expulsion of the child. This is aided by the relaxation of the perineal muscles under the influence of the same drug. Chloroform, being much the more powerful of the two under discussion, will more rapidly and certainly bring about the desired inaction of the abdominal muscles; but it is very possible to obtain the same result by the use of ether. Dr. Curling, in his address before the Hunterian Society, says that "chloroform exerts a direct and more powerful influence on the heart than ether. In those cases, therefore, in which we desire chiefly to obtain muscular relaxation, and in persons whose powers are much depressed, it may be advisable to employ ether." Mr. Lansdowne, Surgeon to the British General Hospital, says, as to the use of ether in labor, that "he finds the uterus sending out the placenta immediately after the expulsion of the child, and there has scarcely been any hemorrhage following. But the state of the perinæum is a thing which forcibly struck me while using ether, that it has invariably relaxed before the head has come to bear upon it, thereby not requiring the pressure of the head to force it open and to lacerate it, as was frequently the case when left to itself in the old practice. This advantageous quality I have not observed while using the chloroform, the parts under its use continuing unaffected by it; neither have I ever found the action of the uterus, when in a sluggish state, induced by the chloroform as it is by the ether." Hence, as ether strengthens the heart while chloroform depresses it; as the advantage of chloroform over ether in subduing the action of the abdominal muscles is more than counterbalanced by the tonic action of the latter on the heart and uterus; as ether relaxes the perinæum in a degree not observed under the influence of chloroform; and as uterine contraction is excited by ether, while chloroform tends to subdue it, it is fair to infer that ether should be chosen, when an anæsthetic is needed, in heart disease complicating labor.

In cases of tapping for abdominal dropsy, it has occurred, in repeated instances, that the patient has died from syncope during the operation. The death, under such circumstances, is due to the sudden removal of

the pressure to which the internal organs had become habituated. This tendency to a fatal syncope may be avoided by keeping up a constant pressure on the abdomen as the fluid is withdrawn. Patients with heart disease are, as has been shown, peculiarly liable to dangerous syncope during pregnancy and immediately after labor. Cazeau states that a patient of his, who had been for three or four years suffering from severe heart symptoms, passed through an easy and rapid labor, appeared not at all fatigued after its termination, and inquired the sex of her child. Whilst the accoucheur was tying the cord, he observed a few convulsive movements, but hardly had time to run to her before she was dead. Therefore, during the passage of the child, and subsequently, during and after the extrusion of the placenta, the abdomen should be firmly, constantly, and permanently supported. It is one of those minor attentions which, by circumstances, become raised to the rank of essentials.

When the labor is safely ended, the patient is not yet out of danger. A diseased heart is a feeble heart, and the loss of blood attending the expulsion of the child and placenta may cause a sudden and fatal cessation of its action. This sudden failure of the vital powers may take place without a symptom of warning, and the patient's condition demands the most active foresight and constant watchfulness on the part of the physician. The labor should, if possible, be terminated with the mother so placed as to require no change after the birth of the child. Her position should be on the side or the back, as the one or the other interferes the less with her breathing. The raising of the head or turning of the body at this perilous moment might be fatal. She should be warned and instructed beforehand, and the necessity of absolute quietness enforced at the time. To diminish the loss of blood, a full dose of ergot (combined with a carminative to prevent nausea) might be administered just before the child's head escapes from the vulva. The pulse should be constantly watched, and the first indication of failure in its strength be instantly met by a stimulant previously selected and prepared with reference to the taste and idiosyncrasy of the patient. Generally, nothing is better than good old brandy. A solution of carbonate of ammonia should be at hand and ready for use. Under the most favorable condition, the accoucheur should not leave the patient within two hours, and not then unless reaction and quiet of mind and body are established. For a week at least, and longer if the heart's action is more feeble than before, the patient should be kept recumbent and quiet, all movements, even such as raising the hips upon a bed-pan, necessary for the calls of nature, being performed by the aid of others. Merriam mentions a case in which a young woman, the third day after delivery, while in the act of relieving herself at stool, fell back and expired. The sense of well-being which a patient may enjoy should not lead to a relaxation of carefulness, but the recumbency and absolute quietness should be maintained for at least a week, unless the heart-beat is calm and the pulse presents satisfactory strength and volume. The diet should be nutritious and digestible, and such as previous experience has shown to be most acceptable to the stomach.

These considerations aid us in deciding another very important point, viz., whether or not a young woman with disease of the heart should be prohibited from marrying? The lady, whose case is given as the introduction of these remarks, had organic disease of the heart. She was engaged to be married, and consulted me as to the safety and propriety of her assuming the risks incident to maternity.

If, in her case, the condition were that of a feeble, flabby heart, with degenerate tissue, the patient certainly ought not to marry. But can this condition be recognized during life, with sufficient clearness to justify a positive answer? If there be long-continued anæmia; more or less emaciation; nervous debility; a small, feeble, slow pulse; and a feeble impulse of the heart, with great dyspnœa on taking exercise, the disease *can* be so far recognized as to enable us to decide that marriage should not be risked. If to these symptoms are added syncope from slight causes, showing that the heart fails to steadily convey the blood to the brain, child-bearing would, in all probability, be fatal. If, on the other hand, the patient be young, well nourished, and vigorous, even with considerable hypertrophy of the heart and cardiac murmurs both direct and regurgitant, and suffering dyspnœa from active efforts; in choosing between evils, we might well decide that marriage is the less, and might therefore be permitted. As this was the condition of my patient I advised the marriage, and it was soon after consummated.

In due time the patient became pregnant, and was delivered at full term. She was then residing in Central New York, and was attended by Dr. M. C. West, who brought to her case all the skill and intelligence necessary to conduct it to a favorable result. His letter is a fitting close to these observations, and is as follows:

"Mrs. —— was confined on the 1st instant, after a labor of nineteen hours' duration. At twelve o'clock at night she was awakened by pain and flowing of waters. I was summoned immediately. Pains continued somewhat regularly, but dilatation did not take place to any extent until about eight in the morning, and was not complete until afternoon.

"Up to this time the dyspnœa, coughing, and vomiting made the case a distressing and alarming one. The head, however, now began to descend, and progressed as steadily and rapidly as could be expected with short pains, until it was well engaged within the pelvis, which it filled almost to impaction.

"Just then, her strength, which before had been remarkably firm, began to fail very perceptibly, and I applied the forceps and extracted the head through the pelvis, when she seemed to revive somewhat. A decoction of ergot and full dose of brandy were exhibited. The pains became vigorous, and I removed the forceps, trusting the dilatation of the soft parts and completion of the labor to the efforts of nature.

"At the expiration of about fifteen minutes she was delivered of a *still* boy, which, however, was readily resuscitated.

"From the time the descent of the head began, the rapid and almost complete subsidence of the chest symptoms was most noticeable.

"Both mother and son (9 lbs.) are doing as promisingly as is common in uncomplicated cases.

"April 7th, 1870."

Progress of Medical Science.

Removal of Multilocular Ovarian Tumor weighing Sixty-two Pounds.—Dr. R. C. M. Page, of this city, adds another to the number of successful cases of ovariotomy. The patient was an Englishwoman, married, æt. 45, the mother of four children, and a resident of Paterson, N. J. Abdomen began to enlarge eight years ago, more particularly on right side. No inconvenience was experienced from the presence of the tumor until three years ago, when she began to

enlarge quite rapidly. Dr. Page saw her for the first time in July, and diagnosticated ovarian tumor. Dr. Ripley, who also saw the case, confirmed the opinion. The patient had never been tapped. The operation of ovariotomy was performed July 25, 1872, by Dr. Page, assisted by Drs. Ripley and Graham. There were a few unimportant adhesions. The sac contained forty-eight pounds of a thick chocolate-colored fluid. The pedicle was short, six inches broad, and was returned into the cavity. No clamp was used. The patient recovered.

Sir William Fergison on Stone.—In the course of this surgeon's remarks before the *British Medical Association*, he said: "A feeling seems to prevail that there is no interest in a stone broken into fragments by the lithotrite, but if it has been cut into two by a saw, after its removal from the bladder, the cut surface is eagerly looked at. No doubt the interest here has reference to the chemical composition of stone, and, possibly, to the nucleus, although the section does not invariably make that clear. In my opinion the fragments of lithotrity possess an interest equal, if not greater, in every respect, to the cut or entire specimens. The chemical composition of a stone can be as readily made out from fragments as from sections; so, also, as regards the nucleus; and indeed from these fragments we can often acquire a knowledge of a patient's constitution, as regards the tendency to the formation of stone, which we cannot in any other way. We can see how, in some, fragments will lie in the bladder, without change of surface, much longer than in others. In one case we can recognize for days, even weeks, the fragments of an uric acid stone with the edges defined and surface the same as when first broken; in another we perceive how readily and rapidly new stone-deposit occurs — generally phosphatic. Then, too, we can speedily appreciate the danger of neglect or carelessness after lithotrity is once begun, for, in place of probably only one stone being present there may, indeed there will, soon be many stones, for each fragment becomes a nucleus for fresh deposit, and this hastens on with greatly increased rapidity. Even the nucleus, always a centre of interest, may be as appreciable in the fragments of lithotrity as when displayed by the saw. ..... I put as much faith as any man does in the chemical treatment, if I may so call it, of the diathesis of stone; but when once a stone has formed (and in most instances it is so without premonitory warning), the 'fact' of stone is established, and there may be room for doubt whether chemical treatment does not then make matters worse; for, whatever the quality of urine, the chances are that a nucleus being present, deposition of stone will go on with increased rapidity, equivalent to the increase of size of the stone. That there may be exceptions to this rule, I admit; and there are two stones in my collection from one bladder, which are so smoothly polished by attrition that the formation of more stone had probably ceased for many months, if not years, before they were removed..... Stone in the bladder is essentially a surgical disease; it can be treated effectually only by the surgeon; and to him the size, or I may call it the circumference of the substance to be removed, possesses the most engrossing interest, whether he looks to his own mechanical work, or the safety of his patient: for I hold it as a maxim, particularly in lithotomy, that the bigger the passage required for egress, the more difficult and the more dangerous is the operation."

Calabar Beans for Constipation.—Calabar beans have, until lately, been but little used except for contracting the pupil of the eye, and by Dr. Ogle, in cholera. Dr. Victor Subbotin, in the *Deutsch. Archiv. Klin. Med.*, proposes them as a remedy for atony of the bowel, observing that it has been found by Bauer, and confirmed by Besold and others, that this drug produces a cramp-like condition in organs that are supplied with involuntary muscular fibres.

He uses the following formula:—

℞. Ext. sem. physostig. ven., grs. iv.;
Glycerin. pur., ℥ij.
Solve. Sig. four drops four times daily.

He first administered this solution to a female who was much constipated from atony of the bowel. After the patient had used it twice, a swelling of the abdomen, caused by fæcal matter, disappeared permanently. Aloes and rhubarb had previously given temporary relief. The doctor has since treated successfully another case of the same nature, and one of chronic bronchial catarrh.

Erysipelas.—Professor Broca has lately recommended a fresh plan of treatment, which, according to *L'Abeille Médicale*, he has often successfully employed at the commencement of the disease. This plan is to apply a layer of collodion upon the skin above the part attacked. The layer of collodion, which is to be on sound skin, should be from six to eight centimetres wide, and form a complete circle, separating the healthy skin from that attacked. A slight circular compression is thus produced, and it is rare for the disease to cross this barrier, behind which it speedily fades. The part should be examined once or twice a day, in order at once to repair any fissures, and the collodion should be quite pure, without any oil, which is sometimes added to it.—*The Doctor.*

Cholera Infantum.—Dr. S. T. Bishop, in a communication to the Fulton County Medical Society, Ohio (*The Clinic*, Sept. 21, 1872), stated that he had treated a large number of cases of cholera infantum during the summer, with but four deaths. His treatment consisted mainly in the use of bismuth, pepsin, ferri persulphatis pulvis and the vegetable astringents.

Tic Douleureux.—James T. Whittaker, M. D., of Linn. (*The Clinic*, Sept. 14, 1872), re-alludes to a case of Fothergill's neuralgia cured by galvanism. This, he says, adds another to the swelling list of confirmatory cases.

Spasmodic Asthma.—The English journals refer to this affection as often following the use of linseed-meal poultices. Ipecacuanha, it is said, has also the power of causing artificial spasmodic asthma and catarrh.

Calcareous Infiltration of the Heart.—*The Glasgow Medical Journal* of August contains the report of two cases of this nature. In the first, the lime salts were deposited in the muscular fibres in the form of minute round granules, the appearance produced considerably resembling, both to the naked eye and microscopically, that of fatty degeneration. The salt deposited in this case was not the carbonate, but probably, entirely, the phosphate of lime. This occurred in a case of chronic bronchitis and emphysema, with a possible syphilitic taint. In the second case the lime salt, which consisted in great part of the carbonate (effervescing with an acid), was deposited more homogeneously, converting the fibres into rigid cylinders, having a considerably crystalline texture. This occurred in a patient who died of pyæmia.

Albuminuria and Diseases of the Urinary Organs during the Period of Fertility in Woman.—Dr. R.

Kaltenbach draws the following conclusions from his long experience in the diseases of women. Albuminuria does not exist as a physiological symptom either in pregnancy or in the puerperal state. During pregnancy albuminuria may occur: 1. In consequence of vesical catarrh. 2. In consequence of general catarrh of the urinary passages, with marked pyelitis. 3. In consequence of stasis in the renal vessels. 4. In consequence of parenchymatous diseases of the kidneys.

In the puerperal state it occurs: 1. In vesical catarrh, which may be called forth (*a*) by chemical or mechanical irritation, as by the use of the catheter; (*b*) by extension of inflammatory processes from the sexual organs to the bladder; (*c*) by severe labor. 2. In general catarrh of the bladder, with pyelitis. This originates (*a*) in consequence of simple extension of primary vesical catarrh; (*b*) from contiguity of neighboring parts in a state of inflammation, especially the inner surface of the urinary organs or the outer side of the parametrium.

Pyelitis sometimes occurs as a perfectly independent idiopathic disease. 3. In stases occurring in the renal vessels in consequence of uncompensated valvular disease, or in consequence of a large strumous swelling. In tissue diseases of the kidney, (*a*) as a primary affection (nephritis parenchymatosa); (*b*) as a secondary affection, (1st) as an extension of inflammatory processes from the bladder into the urinary passages and urinary tubuli; (2d) mechanically, by stoppage of the urine owing to compression of the ureters in the parametrium; (*c*) as metastatic inflammation in pyæmia. It is obvious that several of these causes may exist at one time.

Fœtal Femur Embedded in Uterus.—At the recent meeting of the *British Medical Association*, Dr. Evory Kennedy, late Master of the Dublin Lying-in Hospital, reported several singular cases, among which was the following:—

A lady was brought from the country, anæmic, wasted, and with a countenance expressive of pain and suffering. She had a constant fetid vaginal discharge, which was purulent and occasionally sanious. She was said to have miscarried a year before. She complained of pelvic distress, with lumbar pains and frequent micturition. On vaginal examination, the uterus was found about double its natural size; the os slightly patulous, and a solid resistance presented to the introduction of the finger. After dilatation of the os by means of a two-bladed dilator, a bony substance was found traversing the neck of the uterus at its junction with the body of the organ. It was first necessary to break the bone across with bone-forceps, before it could be detached from the uterine walls, and on being extracted it proved to be the femur of a fœtus of about four months' development which had, by its presence, led to the formation of an abscess in the uterine walls. The health of the woman became very much better, but was never entirely restored, although she again bore children after a number of years.

Portion of Placenta Thrown Off in Pregnancy.—Dr. Kennedy reports the case of a lady who, in the seventh month of her fifth pregnancy, was seized with hemorrhage, ascribed to over-exersion. There were no labor pains. On examination, a portion of the placenta was found protruding from the os uteri. The hemorrhage continued for several days, but to no serious extent, and still there was no labor. At length occurred a fetid grumous discharge, mixed with a little blood, and attended with a sense of downward pressure. The portion of placenta at length came away and the hemorrhage and discharge ceased. The patient took no precaution other than keeping the horizontal posture for six weeks further, when she was delivered of a living boy, apparently at full term. The edge of the placenta which had come away had not included that portion covered by the membranes. There was no discharge of liquor amnii until labor set in.

Syrup of the Lacto-phosphate of Lime.—Those practitioners who desire to prepare their own syrup of the lacto-phosphate of lime, in preference to many unreliable so-called preparations, may note the following formula: Take concentrated lactic acid, ℥ ij., dilute with ℥ ij. of pure water, add of the magma of freshly precipitated phosphate of lime, enough to saturate; of orange-flower water, ℥ iss. Filter. Then add pure water to make up an ℥ viij. mixture, and ℥ xi. of white sugar. No heat is to be employed. Each drachm contains from two to three grains of the dry phosphate of lime. Dose: For an adult, one to two tablespoonfuls three or four times a day.

Post-partum Hemorrhage.—Dr. John G. Miller, of Pleasant Hill, Mo. (*Kansas City Med. Journal*, Aug., 1872), publishes two severe cases of post-partum hemorrhage controlled by compression of the abdominal aorta, in which copious injections were employed. He does not claim any originality in the treatment, but, as it is adopted by very few, these cases are recorded to draw attention thereto, and to encourage others to its use, feeling assured that some patients might be saved in this way which otherwise would be lost.

Acid Reaction of Cow's Milk.—W. C. Evans, M.D., of Kansas City, Mo. (*Kansas City Med. Journal*, Aug., 1872), in an article on the "Treatment of the Diarrhœa of Infancy and Childhood," states that experiments have inclined him to the opinion that the greater part of the milk of cows, in this vicinity, gives an acid reaction at the time it is milked.

E. W. Schauffler, M.D., editor, struck by this statement, immediately commenced testing, with test-paper, the milk of many cows in his neighborhood, and the result so far has been an invariably acid reaction given by the milk at the time of milking. He does not consider the experiments sufficiently extended, as yet, to be of much positive value, but it may very readily be that Dr. Evans' discovery accounts for the fact that many bottle-fed children, who do well further East, relapse into disturbances of digestion the moment they are brought back to that section of country. He earnestly invites observation and reports on this subject from medical men East and West.

Asthma.—Dr. Hale, of Kentucky (*Chicago Medical Times*, Sept. 1872), uses the following prescription with much success, in asthmatical cases: ℞. Ether sulph. ℥ iss.; Tinct. lobelia, ℥ i.; Tinct. stramonii, Tinct. opii, āā ℥ iv. M. S. Teaspoonful every hour or two until relief is obtained.

An Unique Case of Inversion of the Uterus.—Prof. James P. White, M.D., of Buffalo, N. Y. (*Buffalo Med. and Surg. Journal*, Aug., 1872), records a remarkable case of reduction of the uterus, after twenty-two years' duration. The patient, 46 years of age, gave birth to a female child, July 15, 1850; since that date until the day of operation, June 23, 1872, she suffered a continual loss of blood, which, twice a month, amounted to "flooding." The author says: "The reduction of an inverted uterus, except immediately after the accident, is one of the most recent results of Obstetric Surgery. Not merely the propriety, but even the possibility, of its accomplishment has been generally denied by authors up to the present time." Prof. White claims that he originated this operation as long ago as 1856, when he reduced a case of eight

days' duration. This, with nine cases previously reported, makes ten cases operated upon by him.

Dr. O. C. Strong, of Colden, N. Y., writes that "since the operation nothing has transpired to mar the beauty of the result. The patient is now about upon her feet some portion of her time, and everything points to a rapid and, I think, perfect cure. She has had no sanguineous discharges since the operation."

Treatment of Hemorrhage in Typhoid Fever.—S. Weed, M.D., of Clyde, N. Y. (*Buffalo Med. and Surg. Journal*, Aug., 1872), records five cases of grave hemorrhage from the bowels in typhoid fever, successfully treated by oil of turpentine, in from 20 to 60-drop doses. He is well aware that this remedy has been much used of late in the ordinary dose in certain stages, or to combat certain symptoms of typhoid fever, but not in the hemorrhage occurring during their progress.

Local Application of Carbolic Acid in Small-Pox.—L. C. Churchill, M.D., Res't Phys. to San Francisco Alms-House and Pest-House (*Western Lancet*, Aug., 1872), recommends, from extended experience, the local application of carbolic acid in small-pox. In his cases, from the 7th to the 12th day of the well-marked eruption, he added a few drops of water to the carbolic acid, rendering it of a thick syrupy consistence, and with a camel's-hair pencil applied a single drop to the point of each pustule on the face. In one case every one of these pustules was shrivelled up, nearly black, and on the third day from the application they fell off, leaving no pit; at the lapse of two weeks, no pock-mark on the patient's face could be discerned. In another case of variola confluens, at about the twelfth day of the eruption, the carbolic acid, prepared as before, was applied as a varnish freely to the whole face and ears. The results were most unmistakable. On the face, the eruption dried up with promptness and fell off in large scales; in fact, the cuticle of the whole face came off, leaving the surface smooth and healed up, and would require close inspection to discover whether he had ever had the small-pox. He is in the habit of giving, for about one week, sulphite of soda, internally, in twelve-grain doses, every three hours—to shorten the disease.

Prolapsus of the Gravid Uterus.—Dr. H. M. Biggs, of Santa Barbara, Cal. (*Western Lancet*, Aug., 1872), relates the case of an unmarried female, aged 20 years, five months pregnant, who, wishing to conceal her shame, produced complete prolapsus of the gravid uterus by almost starvation and incessantly smoking cigarettes for three days, with pulling on to her belly a "metâte," a slat of stone used by the native Californians for the purpose of grinding corn, weighing about from 30 to 40 pounds. When she called, the uterus, round and hard, about six inches in diameter, extended to within about four inches of her knees. By using steady pressure applied by the hands smeared with oil during about an hour, it popped in its place with an almost audible "flop." Soon afterwards, while giving an account of her sad troubles, slight labor-pains came on and she was delivered of a four or five months' fœtus. The patient made a good recovery, and in ten days was attending to her usual avocations. She has since been married, and had healthy children.

Catarrh of the Mucous Membranes of the Ear.—An interesting and practical paper on this subject, by Wm. F. Smith, M.D., of San Francisco, Cal. (*Western Lancet*, Aug., 1872), gives, in detail, the more modern modes of treatment of catarrh of the Eustachian tube and middle ear, and mentions the well-known fact, that strictures often found in the Eustachian tube in chronic inflammations may be dilated mechanically, but cautiously, by experienced operators, with whalebone probes, or even by bougies made of *laminaria digitata*, as recommended by Schwartze.

To counteract the popular idea, shared by a certain proportion of the profession, that deafness is a natural accompaniment of old age, he states that there is no analogous reason why age should be accompanied by difficulty of hearing. Observation proves that deafness in one or both ears is much more common than is generally supposed, even in young persons. The writer, while a medical student, examined the ears of nearly all the young men of the class of which he was a member. Of 150 students, or 300 organs of hearing, 120 were found imperfect in hearing power, viz., four individual organs in every ten (40 per cent.). Some seemed to be actually unaware of the difficulty, and comparatively few had thought it of sufficient importance to consult a medical adviser.

An Extempore Vaccinator.—Dr. H. A. Dubois, of San Rafael, Cal. (*Western Lancet*, Aug., 1872), reports an *extempore* vaccinator devised by himself, as a substitute for Dr. Carroll's instrument, for which he sought in vain at the stores. A piece of gutta-percha was taken, of these dimensions: length 2″, breadth ¼″, thickness ⅛″; this he softened in hot water, and placed four cambric needles, at intervals of one line apart, on the softened end, moulding it with the fingers until cool. The points projected about ¼″. This simple instrument can be made in a few minutes, at a cost of as many cents.

Over-work and Strain of the Heart.—In continued papers on "Observations upon Over-work and Strain of the Heart," by J. B. Treadwell, M. D. (Boston *Med. and Surg. Journal*, Sept. 5 and 12), the opinion is expressed, from observation of cases during the past eight and ten years, that in persons with naturally weak hearts, dilated from excessive bodily exertion, with mitral incompetence as a sequence, the age of the patient is generally less than twenty-five years, in whom the muscular tissues have not attained perfect maturity of vigor; and this accounts for the exceeding frequency of this class of affections among amateur oarsmen, nearly all of whom, after having had hard practice for a season or two, as far as he has had opportunity to observe, have suffered to some extent in this way.

In regard to other morbid valvular manifestations, he believes, after they have reached a certain stage, these affections progress but slowly, providing that the conditions under which the person is placed be of a favorable character, with of course a total removal of those causes which in the first instance were productive of the trouble. A few, with naturally stronger hearts, may partially recover, providing they be placed under favorable conditions, and that the lesions have not become very severe.

Management of Obstinate Pruritus.—Mrs. J. G. Brown, Resident Physician Ill. Woman's Hospital (*Med. Exam.*, Aug. 15, 1872), speaks highly of the sulpho-carbolate of zinc in cases of obstinate pruritus of the vulva. In one particular case, the vulva, after being thoroughly bathed with tepid water, was washed twice daily with a solution of the sulpho-carbolate of zinc containing half a drachm to the ounce of distilled water, the parts being allowed to dry without wiping. She was much improved at the end of a week. During the second week the application was made once daily, on retiring at night. At the end of the third week the pruritus was wholly relieved.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., Editor.

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THE MEDICAL REGISTER AND THE PROFESSION.

The subject of trustworthy medical registration is one in which the profession are growing more and more deeply interested. Our comments upon the system inaugurated by the Medico-Historical have called forth responses from different quarters and have enabled us to present the views of well-known and careful observers upon questions of much importance. We are willing on our part to do everything which may be calculated to make the medical registration of the City and State everything which the most captious would desire it to be. In order to meet this end, we are willing that every aspect of the question should be presented, and every feasible measure bearing upon it candidly and impartially discussed. We have committed ourselves in favor of the present method, not because we deem it beyond the possibility of vast improvement, but because we are willing to admit that it is the best we can expect under present circumstances. All the necessary commendation of the present management of the *Register* has been already given on our part, and it would not be necessary to remark further under that head, except for the purpose of explaining some points referred to by one or two of our correspondents and seeking information in regard to others.

The positive assertions of one of these gentlemen in regard to the omission of the names of some who should have appeared are worthy of such consideration only as is due a mere individual opinion, and nothing more. He does not trouble himself with any other part of the argument save the conclusion. In reference to general inaccuracies in the work the necessity for his remarks is to be deplored, but the slurring of the efforts and labors of "young medical men" is unwarrantable and altogether out of place. Our correspondent will forgive us for radically differing with him on this question. The very fact of the gentlemen being young guarantees a painstaking enthusiasm which older ones would despise. As far as tender years are concerned we consider his objections the best of recommendations. The greater part of the really hard work in every department of our profession is performed by young brains and if we say that the greater number of additions to our knowledge have been made by the young men we state a fact now universally admitted. The reason why the *Register* does not come up to the ideal of our correspondent is not because its management is intrusted to young men; on the contrary, if it were left to older heads, because they were older, the very abuses which are complained of would be increased tenfold.

In the matter of medical gentlemen being proprietors of drug-shops, it would appear from the representations of this correspondent that gross injustice is done. Taking a superficial view this would be the conviction of every one. We do not pretend to speak for the Society on this question, but can offer a reasonable conjecture which may serve as an answer to these so-called outrages.

Whatever the intention of the Executive Committee may have been, it is certainly apparent that they have done much good by the radical step which they have taken. A few must suffer in any good cause; they must feed the sacrificial fires which must light the pathway of the great multitude of sinners towards rectitude. The altar of expediency must be kept warm so long as progress leads to reform. While we pity the few who may have suffered, we rejoice in the end attained. That end has been the drawing of a very distinct line between legitimate practitioners and the abettors of quackery. By the latter assertion we mean to be understood as saying that few if any could possibly keep a drug-shop and make it profitable without selling patent medicines or without being tempted to cheapen medical advice by charging only for the medicines dispensed. A few doubtless may have been above such trickery, but they were too few to avert the just and general doom of their craft.

All must admit that the non-proprietorship of a drug-shop is a very reasonable standard of merit. In regard to other standards of merit we are not so certain, especially after the assertions made by another of our correspondents in regard to the omission of the names of gentlemen who are members of recognized societies. We had until the present believed that the fact of the admission to the Academy of Medicine, for instance, was a sufficient guarantee of respectability. As we are, from facts shown us, mistaken in this, we are at a loss to answer a very pertinent question. One of three things must be admitted: either the Academy of Medicine is not careful enough in the admission of members, or is afraid to discipline them when admitted, or the Medico-Historical Society dares to create for itself a higher standard of merit in regard to some points not generally appreciated by the profession at large. The latter con-

struction will be placed on their action by the majority of the profession, who may not be able to see why the American Medical Association (a body now virtually defunct) and the County Society of New York should be the only ones to which credit should be given for vigilance in the selection of members, or against whose codes of ethics no exception can be taken. The fact is, all the Societies—Academy of Medicine, New York Pathological, and others—claim to be governed by the self-same code adopted by the aforementioned associations, but why they are not considered equally authoritative in vouching for respectability we are at a loss to conjecture. We are forced to admit that there is a discrepancy here which needs some explanation. No one objects to higher standards of respectability, and every one in the interest of reform and progress is willing to uphold them provided it be known what they are. In this particular at least, "in rising to explain" we confess that the thread of our argument is not intact, and we look to the Medico-Historical to help us out. We do this not with any desire to vindicate any unwarrantable assumptions on the part of the said society, or to endeavor to cover up any of its mistakes, but solely for the purpose of getting at the true foundation upon which a thoroughly trustworthy and impartial registration should rest. If the Medico-Historical and the profession of the State are to work together, it is very necessary that they should thoroughly understand each other.

Reviews and Notices of Books.

HYSTEROLOGY: A TREATISE, DESCRIPTIVE AND CLINICAL, ON THE DISEASES AND THE DISPLACEMENTS OF THE UTERUS. By EDWIN NESBIT CHAPMAN, M.A., M.D., late Professor of Obstetrics, Diseases of Women and Children, and Clinical Midwifery in the Long Island College Hospital. New York: W. Wood & Co. 1872. 8vo, pp. 504.

THIS is a handsome volume, and a credit to the taste and the resources of the publishers.

The author has for many years enjoyed a high local reputation as a careful observer and an independent thinker.

As a lecturer he has been remarked for his disposition to develop principles rather than details, and to simplify the subjects treated.

A similar tendency appears in the volume before us.

The preface opens thus:—

"Being called upon some twelve years since to fill the chair of Clinical Midwifery in addition to that of Materia Medica and Therapeutics, I accepted the position with great reluctance and many misgivings. My reluctance arose from the fact that, both in dispensary and private practice, each and every plan of treatment then in vogue had in my hands proven unreliable."

We think this statement certainly indiscreet and probably incorrect, inasmuch as throughout the book we fail to discover any new methods or views advanced by the author. The merit of the book, such as it is, consists in the clear and full development of one leading pathological idea, as old as Hippocrates at least, and the persistence and address with which its therapeutic indications have been pursued by the author.

At the outset we are greeted with a new title, "Hysterology," a correct and well-formed word, employed by the author to indicate that his studies relate only to that branch of Gynæcology which treats of diseases of the womb. He has excluded the study of the ovaries, the pelvic and abdominal peritonæum, the ligaments, and all the viscera of the pelvis. Of this we may not complain if he chooses to write of "Hysterology" alone. But when we add that he has equally ignored all forms of heterologous growth—has nothing to say of uterine fibroma, which alone, according to our experience, is the basis of fully one-fourth of all cases of uterine disease; that carcinoma uteri and all the varieties of cancroid are hardly mentioned, we may understand how far the volume fails to be a complete résumé of morbid conditions of the uterus—as its title assumes. We will venture, therefore, to re-name the book in such a way as shall properly describe it, as follows: "Vascular Congestion in its relation to Uterine Diseases and their Treatment."

For the fairness of the above title we refer to p. 87, where, under the caption "Synopsis of the Author's Pathology and Etiology," we find the following aphorisms:—

"1. That the female sexual organs are under special physiological laws from the time of the advent to the decline of the menses, a period within which uterine disease is *limited*."

[*Mem.*—This statement is correct only if we assume that polypi, fibroids, carcinoma, and cancroids are not uterine diseases.]

"2. That menstruation, sexual congress and utero-gestation occasion a marked congestion of the internal genitalia—a congestion unknown to other organs, but in these physiological and in harmony with health."

"4. That as disease, wherever arising, consists simply in a perversion of natural laws, the genital organs are especially prone to have this physiological congestion converted into a pathological.

"5. That in womb-disease the internal genitalia are the centre of a continuous nervous and vascular afflux, *precisely* as though the monthly excitement were prolonged through the whole intermenstrual interval.

"6. That this congestion affects the ovaries, the vagina, and the body, neck, and cavity of the uterus, stimulating their nerves, enlarging their blood-vessels, and exalting their vital status."

"7. That an increased nerve and blood-force develops the embryonic germ-cells of the uterus—whence hypertrophy, simulating that of pregnancy, follows as a necessary result.

"The existence of congestion and non-existence of inflammation is shown:—

"1. By the absence of the symptoms, products, and lesions of inflammation.

"2. By a stasis of blood, as that due to the suppression of the menses, to non-involution after abortion or labor, or to obstruction from prolapsus, procidentia, or other displacement, being usually the cause of uterine disease."

Note.—Here the author deserts his principles and proclaims that the displacement may cause the disease, while elsewhere he asserts that the displacement is always the result of the congestion.

"3. By the rapid cure effected in recent cases by the loss of blood, spontaneous or artificial."

[*Note.*—This is equivalent to saying that metrorrhagia resulting from an atonic condition of the uterine vessels tends to cure the atony, which is not in accordance with common opinion on that point.]

"4. By the sudden production of enlargement of the uterus, of apparent induration of the cervix, of expansion and elongation of the labia uteri, and of a copious leucorrhœal discharge, from a temporary obstruction to return of blood from the uterus, and by the prompt disappearence of these conditions on the removal of the obstruction."

"5. By the so-called inflammatory ulceration lacking all the characteristics of an ordinary ulcer, and resisting direct applications, but yielding to depletion of the uterine vessels."

"6. By true ulceration from sponge tents, pessaries, or other extraneous cause, cicatrizing spontaneously on the removal of the source of the irritation, a singular result were the cervix inflamed and indurated."

"7. By the so-called hypertrophy, ulceration, and induration of the neck, being common in the multiparous uterus, which promptly responds to treatment; but rare in the nulliparous uterus, which, scarcely altered in appearance, presents a disease so intractable that a cure is with difficulty obtained."

"8. By the existence in the multiparous uterus of a real hypertrophy, development of muscular tissue, mucous membrane proper, and utricular glands, in imitation of a like process taking place normally in pregnancy."

[*Note.*—The author here gives us assertions without researches which support them. The question is far from being settled and the extreme rarity of death during the continuance of the disease renders the collection of histological studies a very slow matter. Thus neither Stricker nor Rindfleisch, otherwise so full, have any observations upon this point. Scanzoni and Klob assert that hyperæmia is followed by proliferation of connective tissue principally. Finn of St. Petersburg asserts that the connective tissue is slightly increased and the muscular largely, not by the introduction of new elements but the increase of size in the normal fibres. Noeggerath and Kammerer do not admit the existence of a concentric hypertrophy of the body of the uterus except as a consequence of the puerperal state. Thus if this hypertrophy is simply suspended involution its elements must be those of the pregnant uterus, in which muscle, nerve-fibre and vessels are relatively in excess, although mucous and connective tissues are largely increased. It is admitted, we believe, on all hands, that the cervix is frequently the seat of a non-inflammatory proliferation in which connective tissue only predominates and the vascular elements are positively atrophied. To this condition Dr. C.'s depletory practice is manifestly not applicable.]

"9. By the cervical glands always secreting albumen and never pus, and by the infrequency of suppuration in the cellular meshes in which these glands are embedded, as would not be the case were the neck inflamed and indurated."

We regard many of these points as very well taken, particularly those of the last series. It has always been a difficult matter to harmonize the clinical pathology of chronic metritis with the necroscopy of the disease. Every uterine specialist knows the, at least, approximate truth of the 4th, 6 h, and 9th paragraphs of the second series.

The large number of cases (unsatisfactory as their history is) in which Dr. Chapman has pursued this one idea, in treating all forms of uterine disease, with good success, shows that he errs only in assuming as the constant and sole constituent, that which others are content to admit as a prime factor in these cases.

Whoever will read recent discussions in the New York Academy of Medicine and elsewhere, will see that Peaslee, Thomas, and Kammerer have stated in more guarded and moderate terms the doctrine which Chapman thus pushes to extremes.

The three hundred and fifty-seven cases which Dr. C. prints, either in detail or abstract, although as a whole entitled to much weight, form a very large and very faulty part of the book.

No such number was needed to support his general principle, and it is quite amusing to see how very many of them fail to do so. What possible value is there for such a "case" as "No. 26," which we give just as printed by the author.

"Mrs. D—, æt. 23, married, nullipara. Diagnosis—Congestion of inner cervix. Examination: none. Symptoms: complaining since marriage; leucorrhœa; usual symptoms of debility. Duration: three years. Cause: sterility. Treatment: *none.* Result: made *one* visit." This is bad enough, but on examining this series of cases, 71 in number, under the head of "result," we find: "Made one visit" 27 times; "Made two visits," 8 times; "Made three visits," 7 times; "Not recorded," 3 times; "Cured," 10 times; "Partial cure," 12 times; "Unchanged," 4 times.

Occasionally a detailed case is very well told and fairly supports both pathology and treatment, but, as a body, they are meagre and inconclusive, and monotonous beyond anything we have ever seen in print. So preoccupied with his one idea is the author, that he restates it from every conceivable aspect, and forces everything into conformity with it. Thus, page 457, he says: "Of the many instruments for retroversion and anteversion little need be said. They not only seldom confer any lasting benefit, but almost invariably inflict irreparable injury. Wherefore, should either of these displacements defy all efforts directed on the principles just advocated (anticongestive), it would be the lesser evil to let patient endure the pains Nature inflicts rather than, by the attempt to do more, incur the hazard of adding others of greater intensity, and thus increasing her misery," which strikes us as a quiet way of disposing of the experience of Hodges, Barnes, Zwank, etc., etc. Perhaps it has something to do with the reason why so many of Dr. C.'s cases "Made one visit." The only pessary which Chapman recommends is the old "globe," which we regard as quite on a par with his exclusive use of Ferguson's and Segala's specula.

Furthermore, so rapt does he get in his one idea that he rises into the loftiest rhetoric, worthy of camp-meeting tones and inflections; *e. g.* the following from pp. 346–7, which we copy partly for its truth, and partly for its—bathos: "The congestion, thus sudden in its accession, induces a profound local perturbation, that reacts on the brain and spinal marrow immediately and violently. Nature, ever beneficent, and ever striving to bring harmony out of discord, is abruptly thrown from her equilibrium, swerved from her accustomed channels, and robbed of her supremacy. The concordance and correlation of the nerve-forces is rudely interrupted, and discord and anarchy prevail. Besides, from this neuralgic state of the uterus, ovaries, and vagina, continuing without abatement, there is no relief to the irritation and tension of the nervous system, that constantly vibrates and thrills with agonizing irradiations (sic); whence the nerve-prostration assumes a fixed character, and undergoes no change except from worse to worse; the nerve-aberration is widely erratic (sic) and wholely untrammelled by physiological laws, and the nerve-sensibility is whetted to the keenest edge, and never for a moment blunted. . . . Not only this, but as the disease culminates the supremacy of mind is shaken, reason becoming unreason; thought, thoughtlessness; will, wilfulness; purpose, perversity; and

every other attribute of a true character supplanted by its opposite; and then, alas! the pain-stricken, woe-begone, hope-bereft patient, a mere nervous wreck, is, month after month, year after year, driven hither and thither on a tumultuous sea of unrest, a prey to every ill that can assail her, bodily or mentally, through a prostrated, perverted, over-stimulated nervous system. What makes the case still worse, is the fact that the luckless victim of these barbed shafts of an ill-starred destiny is robbed of the power to throw off the incubus, and lies perforce in a nightmare, breathes Stygian airs, and has a murky, noisome world around, and a lowering, wrathful heaven above! Now, of a verity, the uterine nervous system wreaks its wild frenzy uncontrolled, and lords it over all without check or hindrance. The head is brought under the lawless sway of a member, and the pitiful patient, given over to the illusions and promptings of an ill-balanced and perverted mind, becomes the subject of a species of *furor uterinus*." That's what's the matter.

It is not to be wondered at that, with such terrific command of language, we should get some peculiar Latin, as for instance, repeatedly, *nidus* (a nest), where plainer people would use nisus (an effort), and that the old adage, "Causâ sublatâ, tollitur effectus," should reappear as "tollit causam, effectus cessit." While there is thus abundant room for criticism, the book deserves to be read, cum *acervo* salis. It will interest and profit neophyte and expert, and the latter quite as much as the former.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 23, 1872.

Dr. Abraham Jacobi, President, in the Chair.

NEW MEMBERS.

The following gentlemen, recommended by the Comitia Minora, were granted certificates of membership. A. E. Regensburger, 66 W. 36th Str., a graduate in Medicine at the College of Phys. and Surg. in 1872; Gendy King, 248 W. 25th Str., a graduate in Medicine at the Medical Department of the University of the City of New York in 1871; Heber Smith, 6 W. 127th Str., a graduate in Medicine at the College of Phys. and Surg. in 1861; Isaac Adler, 10 W. 34th Str., a graduate in Medicine at the University of Heidelberg, Germany, in 1871; George Thompson, a graduate in Medicine at the University of Vermont, in 1864.

The President also announced the death of the following members:—Galen Hunter, a graduate in Medicine from Dartmouth College, and member of this Society since July 9th, 1841; died in this city, August 6th, 1872, aged 72 years. Charles Henschel, a graduate in Medicine at the University of Wuerzburg, Bavaria, and a member of this Society since March 9th, 1833; died at Zurich, Switzerland, Sept. 18th, 1872, in the 64th year of his age. Gilbert T. Totten, a graduate in Medicine at the College of Phys. and Surg., and a member of this Society since February 1st, 1864; died at Chetaltenaugo, Guatemala, May 29th, 1872, of typhoid fever.

No motion to the contrary being made, the President, later in the evening, appointed the following committees to draft suitable resolutions.

In the case of Dr. Henschel; Drs. E. Krackowizer, E. Elliot and J. T. Metcalfe. For Dr. Hunter; Drs. Blakeman and Hubbard. For Dr. Totten; Drs. Wm. T. White and A. E. M. Purdy.

REPORT OF COMMITTEE ON DISEASES.

Dr. Chas. P. Russel, Chairman of the Committee on Diseases, then read the following report:—

The Committee on Diseases has the honor to present the following Report, embracing the second or spring quarter of the year—ending June 30th—and the succeeding eleven weeks up to September 14th.

During the quarter named, the following number of contagious diseases were reported to the Bureau of Sanitary Inspection of the Health Department: Small-Pox, 1033—a weekly average of 79;—Measles, 705—a weekly average of 54;—Scarlatina, 1106—a weekly average of 85;—Typhus Fever, 43—a weekly average of 3;—and Typhoid Fever, 103—a weekly average of 8. During the subsequent eleven weeks the average weekly number of small-pox cases has diminished from 79 to 10—that of measles from 54 to 21—and that of scarlatina from 85 to 23. That of typhus fever has remained at 4, while that of typhoid fever has increased from 8 to 13.

The total mortality of the spring quarter amounted to 8737—an increase of 1331 upon the previous quarter, and an excess of 2116 over the corresponding period of 1871. Zymotic affections produced 3209 deaths;—constitutional, 1687;—local, 3014;—developmental, 471;—and violent causes 356. The most prominent epidemics were small-pox and cerebro-spinal fever, which caused respectively 459 and 492 deaths—a weekly average of 35 and 38. During the summer both of these diseases have experienced a constant decline, and can now no longer be regarded as having any epidemic tendency. In the eleven weeks past, ending September 14th, the fatal cases of small-pox amounted to only 59, and have recently averaged but 1 weekly. In the same period the deaths from cerebro-spinal fever were 115 and are now reduced to an average of 4 weekly. Scarlatina was also very prevalent and fatal in the spring quarter, having carried off 367 persons, of whom 339 were less than ten years of age. 187 deaths were referred to measles—175 of which were of children under five;—200 to diphtheria and croup; and 190 to whooping-cough, over three-fifths of which were of females—a peculiarity always characteristic of this affection. Both of the last mentioned diseases were particularly fatal, but their prevalence, as well as that of scarlet fever, diminished materially during the summer months, and their mortality is now inconsiderable. Typhus fever caused 17 deaths during the quarter, and typhoid fever 62, the former being about the same number as in the spring quarter of 1871, but the latter showing an excess of 23 deaths, and a slight increase over the winter quarter of the present year. The latter disease has since continued to increase, its mortality during the past eleven weeks averaging 10 weekly. Remittent and intermittent fevers were both very widespread and fatal during the spring quarter, having severally occasioned 32 and 33 deaths. Up to September 14th, the former caused 50 additional deaths and the latter 26. While typhoid fever has been scattered over the whole city, remittent and intermittent fevers have been mainly confined to the 12th and 22d wards, where their exciting influences are almost universal. Diarrhœal diseases produced during the same quarter 867 deaths—121 more than in the corresponding period of 1871. This class of affections has rarely been so fatal as during the past summer. In the four weeks ending July 27th, they occasioned 1886 deaths, 653 of which occurred in

the memorable week ending July 6th. Of these 1886 deaths 94 per cent. occurred among children under 5 years old. 2 deaths from relapsing fever were registered during the quarter. Hydrophobia caused 2 deaths and 2 others have since been reported. 1048 deaths during the quarter were due to phthisis pulmonalis, of which 370 took place among natives and 678 among foreigners. Pneumonia caused 621 and bronchitis 287. All of these diseases were very much more fatal than in the previous year; pneumonia maintaining the apparent epidemic character which had marked it in the winter months. Its fatality, however, has recently declined to its average. Cancer was credited with 107 deaths, only 24 of which were among natives. This enormous difference between native and foreign deaths from cancer is a curious fact running back through many years. 266 deaths were attributed to Bright's disease and 132 to puerperal affections. 301 deaths were the result of accident or negligence;—21 were referred to homicide and 34 to suicide. 91 persons were either drowned accidentally or found drowned—an unusually large number.

316 persons have thus far this year succumbed to the direct effects of solar heat, a greater number than ever before recorded for any one year in this city. During the week ending July 6th, there were 212 such deaths. The greatest number on any one day—viz. 68—occurred on July 2d, on which day was recorded the maximum temperature for the week—viz. 97° in the shade and 128° in the sun—as well as the highest degree of humidity—84; forty of the sunstrokes upon that day proved fatal within eight hours of the seizure.

The same week was signalized by the greatest mortality ever known in New York in the same space of time. 1591 persons died within that period of seven days, 351 of whom were carried off in a single day—July 2d. The maximum mortality of the year had never before occurred so early in the season. Between 1855 and 1865 it was never attained before the 3d week of July—in 1857 it was delayed until September, and in 6 out of the 10 years until August. Since 1864, when during the four years previous it had occurred in August, it has been retrogressive—in 1867 alone coming in the 4th week of July;—in '65, '66, and '70 in the 3d week of July—in '67, '69, and '71 in the 2d week of July—and in the 1st week in July of the present year.

NOMINATION OF OFFICERS.

The Society then proceeded to the nomination of officers for the ensuing year, as follows:—

For President—Drs. Elsworth Eliot, Austin Flint, Sr., Fordyce Barker.

For Vice-President—Drs. H. B. Sands, H. D. Noyes, and C. P. Russel.

For Recording Secretary—Dr. A. E. M. Purdy.

For Corresponding Secretary—Drs. B. S. Thompson, and F. A. Castle.

For Treasurer—Dr. Joseph E. Janvrin.

For Censors (five to be elected)—Drs. A. Jacobi, H. T. Hanks, J. C. Peters, C. A. Leale, B. St. John Roosa, T. C. Finnell, M. H. Henry, John J. Crane, James Ross, William B. Eager, A. Hadden, E. Mason, C. M. Allin, Francis Delafield, C. C. Lee.

For Delegates to State Med. Soc., to serve two years, in place of Dr. Bozeman, elected permanent member—Drs. Wooster Beach, C. A. Leale, C. W. Packard, E. Krackowizer, and M. H. Henry.

At 8.30 o'clock, Professor E. G. Janeway read the paper of the evening.

Dr. Finnell thought that Prof. Janeway's statement regarding the infrequency of idiopathic peritonitis merited further remark, and believed that those who suppose they have cases of this nature are very commonly mistaken. In twenty-five years of experience in making autopsies for coroners, he has never seen a case that could not be traced to some assignable cause. Other conditions, to which the paper referred, viz., perihepatitis and perisplenitis, were commonly, in post-mortem examinations, overlooked entirely. He also remarked that in very many cases of sudden death the lesion was to be found in the brain, and that their discovery demanded an exercise of the care which was evident in the cases related by Professor Janeway, whose attention to details was worthy of most favorable comment. This attention to details was especially needed in coroners' cases, in which, too often, they had likely been satisfied with a diseased cardiac valve, when the brain was the organ at fault.

Dr. Wooster Beach was called on by the President, and said that he was not prepared to say anything in addition to what had already been said, but would remark, in response to Dr. Finnell, that all coroners' cases were not made in the manner indicated by Dr. F.; that some of the examinations mentioned this evening by Dr. Janeway had been made for the coroners.

Dr. Finnell inquired if Doctor Janeway could say whether any of the cases of hemorrhagic meningitis were spontaneous? To which Dr. Janeway answered that he was unable to say, as many of the cases came to his notice without any previous history.

Dr. Finnell had been impressed with the belief that it was always traumatic.

Dr. Russell said that peritonitis was very commonly given as a cause of death, and the Board of Health had frequently returned certificates in order that they might, if possible, get at the actual cause. The certificates would generally come back with the statement that the peritonitis was simple or idiopathic, but in these cases no post-mortem examination had been made.

Dr. Putnam remembered a case which had come to her notice, in the service of a Parisian hospital, in which a boy of 16 years was admitted with what was supposed to be typhoid fever. Later the case assumed the appearance of acute peritonitis, and at the autopsy the cause of death was found to be peritonitis produced by the lodgment of a cherry-stone in the vermiform appendix, and the inflammation consequent thereupon.

Dr. Noyes said that in the course of his experience he had noticed many references to cases which were pronounced to be tumors of the brain, and he would like to inquire of Professor Janeway if in his post-mortem examinations he met with many such cases, to which Dr. Janeway replied that they were met with but very rarely.

The President said that it had been stated by a French writer that tumors of the brain were more common in children under fourteen or fifteen years of age than in older persons; and asked if Dr. Janeway's experience had not been mostly among adults. To which Dr. Janeway answered affirmatively, and called attention to the not unfrequent instances in which the presence of such tumors is the cause of idiocy in children.

Dr. Henry referred to a case published by him last January, in which the symptoms indicated the presence of a cerebral tumor, and a gummy tumor was found at the post-mortem. In this case a fatal result was precipitated by the excesses of the patient. He inquired if Dr. Janeway could say what proportion of the patients he had examined had had syphilis.

Dr. Janeway said for the reason he had above given, viz. the lack of previous histories, he was not able to do so.

Dr. Knapp, in response to a call from the President, said that he had little to say that would be worthy of

attention. Perhaps he might mention that the symptoms which were commonly ascribed to tumors in the brain, especially those manifested in the eye, as neuritis optica, neuro-retinitis, and peri-neuritis, are, in the majority of cases, produced by other morbid processes in the cranial cavity than tumors. He remembered a case in which all the symptoms of cerebral tumor were pronounced, and in which the autopsy showed a tumor-like swelling in one hemisphere, but which in reality was marked sclerosis of the corpus striatum and thalamus opticus. More or less acute exudative processes of a purulent or serous character present the same symptoms.

Not long ago he had also made an autopsy in the case of an old gentleman, who, besides the ordinary symptoms of irritation and compression of the brain, showed well-marked neuro-retinitis in both eyes. The lesion was a large hemorrhagic infarction, and the changes dependent upon it. In the majority of cases tumors are only to be distinguished by the presence of intense and nearly constant headache.

Still more interesting to him were those not very rare cases in which neuro-retinitis was combined with marked symptoms of cerebral irritation, which might have been referred to the existence of a tumor, but afterwards disappeared together with the neuro-retinitis. What the exact nature of such cases is, may be difficult to determine, but they show that we should not be too hasty in the diagnosis of a morbid growth in the brain; and teach us emphatically how necessary it is to study carefully the pathology of the varied intra-cranial processes which clinically produce approximately the same complexity of symptoms.

Dr. Noyes, in continuation of the cases related by Dr. Janeway, mentioned the case of an old gentleman of sixty years, who, after suffering for several days from febrile symptoms, headache, and disturbance of his mental functions, was attacked with glaucoma, which was subdued by proper operative procedures, but without corresponding improvement of his vision. The case was seen in consultation with him by two prominent physicians, one of whom pronounced it remittent fever.

The patient passed from under his care, and subsequently died. After considerable effort an autopsy was obtained, and it was discovered that there was extensive atheromatous degeneration of the arteries at the base of the brain, and that the central brain tissues were, in consequence, very much softened.

Dr. J. L. Brown said there was one practical view of the question which had not been noticed thus far in the discussion, namely, that while everybody was willing to acknowledge the necessity for just such thorough examinations as had been detailed in the paper, he knew of perhaps only half a dozen persons present who were competent to make them. He was quite sure that he was not, and he had known of cases in which a post-mortem examination had failed to discover any sufficient cause for death. The truth is, that this subject of the mode of making post-mortem examinations is not taught as it should be to medical students, and he would be glad to see it receive more attention.

Referring to the remarks which had been made on the subject of peritonitis, in view of its traumatic origin it had been proposed to treat it by gastrotomy; by which measure the cause could be reached. It was well known that in some cases which had demanded this operation, such as tumors of the ovary, pre-existing peritonitis had disappeared with the recovery from the operation.

A systematic method of post-mortem examination would do much to clear up our knowledge regarding the frequency of many diseases, carcinoma of the ovary being mentioned as an example.

Although it is commonly supposed to be by no means a rare affection, a prominent ovariotomist of this city had seen but nine or ten examples in all, and another, equally noted, had seen only two. Spencer Wells in his experience, which embraced hundreds of cases, had seen but three or four of this nature.

To illustrate the value of care and attention to details, he would mention a case which was not very much to his own credit, which he regretted, but was of considerable credit to one of the female members of the Society.

He had been asked, about the middle of the day, to assist at a post-mortem, in which it was found that the cause of death had been gangrene of six or eight inches of the small intestine. Ordinary care in the examination of the viscus developed no cause for this condition. There was neither hernia, intussusception, nor impaction of foreign matter, and he came to no decision as regards the cause of the lesion. It was easy enough to decide upon what caused the death of the patient; but what was it caused the death of the bowel? The physician referred to, however, carefully removed the specimen, and by careful examination found the branch of the mesenteric artery, which supplied this part, closed by an embolus.

He thought the true value of Dr. Janeway's paper was that it showed not only that post-mortem examinations should be made, but that they should be made well and thoroughly.

Dr. Putnam thought this moral might also be drawn: that we should not be too hasty in arriving at a diagnosis in obscure cases, and related as an illustration a case in which a well-known gynæcologist diagnosticated the presence of a bifid uterus in a patient thirteen years of age, who, however, appeared to be only eleven. A large tumor was present in the hypogastrium, which was supposed to be fluid retained in one of the horns of the uterus, to evacuate which a puncture was made; and the patient, previously in good health, died in three days of metastatic abscesses in the lungs, and at the autopsy the tumor was found to be osteo-sarcoma of the right pubic bone.

MISCELLANEOUS BUSINESS.

Dr. J. N. Merrill wished the opinion of the Society on some questions of ethics. He had been called to attend a woman upon whom an abortion had been produced two weeks before, and who suffered such consequences that it became necessary to call in medical aid. Several physicians had been called on, but had decidedly refused to have anything to do with the case, although the woman was in a most critical condition. He wished to know if it is the duty of a physician to attend when called to a case of abortion; and, further, if it is his duty to take the initiative in legal proceedings against the person guilty of producing it. Some remarks were made by Dr. Harwood, who had been called in a case of similar nature, and the President expressed the opinion that the nature of the service does not, in such cases, excuse a physician from his general duty to relieve suffering. He may, however, take any measures that may be needed to protect himself from false accusation.

As regards the second question, the President thought decision would have to be left very much to the judgment of the physician himself. In many cases any attempt on the part of the physician to institute legal proceedings would be productive of harm to his patient, and that would at once decide the question in the negative.

Dr. F. V. White, referring to a correspondence which lately appeared in The Medical Record, asked the privilege of inquiring of Dr. Russel what authority the

homœopaths had for asserting that they have a less percentage of mortality in their practice than the regular profession.

Dr. Russell said the gentleman had used the privilege, which is open to all, of examining the books of his office, and had, moreover, employed the services of a couple of clerks for two months. Nevertheless, in the statements he had made at the meeting of some homœopathic society, he had distorted facts, and administered untruths in other than homœopathic doses. As an illustration of the way he had conducted his examination, Dr. Russell mentioned that he had commenced by placing homœopathic physicians in good standing in one list, and in the other embraced ourselves, with all the quacks, abortionists, and irregular practitioners.

Dr. Jacobi remarked that since the statement referred to did not make any estimate of the comparative numbers of patients treated by the two classes of physicians mentioned, the statement of comparative mortality was of no value whatever. The whole affair reminded him of something which occurred not long ago; when a physician had said that Dr. Jacobi killed a great many more babies than he did—*ergo*, he was the better doctor of the two. He (Dr. Jacobi) had been uncourteous enough to remark that perhaps Dr. Jacobi "killed" more babies than this physician referred to treated altogether.

Again, no account appeared to be made of the fact that the great multitude of pauper patients which are found in our numerous public hospitals and dispensaries are under the care of regular practitioners, whereas the homœopaths have not a single hospital containing patients of this class.

Dr. Russell explained that the person who made this estimate had professed to exclude from his list all hospital and dispensary physicians, but as very many of our best physicians hold hospital and dispensary appointments, and as it is a matter of impossibility to say what patients are treated in the public, and what in the private practice of these gentlemen, the valueless character of the estimate is apparent. Furthermore, the author of the homœopathic circular estimates an average of 30.89 deaths to each regular physician, whereas he doubted very much if there is a single regular physician in the city, who had as many as thirty deaths in his private practice during a year; the number, even among some of our eminent men, being much below that number.

One of the older members of the Society, in relating "what he knew about signing death certificates," said that he had found that in his neighborhood the homœopaths were in the habit of getting rid of cases which were likely to terminate fatally, and of shifting the responsibility of signing a death certificate upon the shoulders of some regular physician. During the years in which he had practised in the country, he had accumulated on his books over three hundred cases of this sort, which had been turned over to him by the homœopathic practitioners around him.

On motion the Society adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 11, 1872.

Dr. Erskine Mason, Vice-President, in the Chair.

SUDDEN DEATH THE RESULT OF DRINKING A LARGE QUANTITY OF WHISKEY.

Dr. Finnell presented a stomach removed from a male, aged 19, who up to the day of his death had been in excellent health. Returning from his work one evening with some companions, and being chided by them for not drinking, he finally became so much annoyed that he wagered to take more liquor than any of them. He accordingly entered a Fourth Ward drinking saloon, and drank at a single draught a large goblet of the strongest Fourth Ward Whiskey. A second glass of the same liquor was shortly after drunk, ten minutes after which he reeled and fell upon the floor, and commenced vomiting blood. Half an hour afterwards he was a corpse. The case was looked upon at first as one of poisoning, but as other of his companions had partaken of the same whiskey without any extraordinary effect, the idea was abandoned. An investigation was however ordered by the coroner, the result of which proved that death was the direct consequence of shock produced by the ingestion of such a large quantity of spirits upon an empty stomach.

At the autopsy all the other organs of the body, as far as examined, were healthy, save the stomach—the mucous membrane of the great cul de sac of which presented an intensely injected appearance.

In the course of the discussion which followed, Dr. Finnell remarked that the fatal result in this case was due to the fact that the deceased had not been in the habit of drinking. If it were otherwise, as in the case of some of his companions whose stomachs were thickened by habitual intemperance, it would have had no other effect than to induce gross intoxication. He remarked that he had at the time under treatment for carbuncle on the back of the neck a German who daily drank thirty-two glasses of lager-bier, and a large weiss bier glass full of Rhein wine twice a day besides. At the time of reporting the case his patient was still alive. In regard to the particular kind of whiskey drunk in the low drinking saloons, he stated that it was adulterated invariably. For the most part it was manufactured from alcohol flavored with oil of juniper, to which dilute sulphuric acid was often added to give it the "tang" so much relished by old topers.

PURPURA HÆMORRHAGICA.

Dr. Lewis Smith presented a specimen of a kidney taken from the body of an infant, that died September 4th, at the age of twelve days. It was the twelfth child of the family, most of the other children now living, and having good health, never having exhibited symptoms of constitutional disease. The parents have ordinarily had robust health, but during the last year the mother's appetite has been poor, and she now presents a pallid and cachectic appearance. To her cachexia the disease of the infant was apparently referable.

The birth of the baby, on August 23d, was normal and easy: it seemed well developed and of good color, and had the usual evacuations. On the third day, August 25th, it began to be feverish and fretful, scarcely sleeping, and the bowels were constipated. On this day the diaper was observed to be stained with blood, which, as was ascertained by examination, had escaped from the urethra. On the 26th the quantity of blood increased, so that no urine was passed that was not deeply stained with it, and some of the diapers contained nearly pure blood slightly clotted.

The records, August 27th, state: The hæmaturia continues and is evidently weakening the baby; the surface is losing its reddish hue, and is presenting a more pallid, and slightly icteric appearance. To-day tetanoid spasms occur of the muscles of all the extremities, but the jaws are not fixed as in tetanus infantum; it refuses or is unable to nurse: pulse 124 when quiet, over 160 when crying. Compresses of cold water are applied

over the bladder, and a few drops of Bourbon whiskey are given at short intervals in the breast-milk.

Aug. 29th. The spasms and hæmaturia continue, but the quantity of blood is less; respiration 24, pulse 120, temperature 99¼; there is evidently considerable decline in strength; is very restless, sleeping but little, takes the breast-milk and whiskey from a spoon. Give hydrate of chloral, gr. ½, according to the restlessness and spasms.

Sept. 1st. Has taken the chloral hourly or less frequently, with the relief of the spasms, and procurement of considerable sleep; pulse 124, respiration 34, temperature 102°. On September 2d, there had been no more hæmaturia or spasms; the baby was quiet, and slept sufficiently, but was evidently sinking. Death occurred September 3d. During its sickness a large purpuric spot appeared on the right arm, another less distinct on the left arm, and two of less size on the trunk; the cord separated at the usual time, and there was no hemorrhage or appearance of disease at the umbilicus.

Autopsy.—Permission was given to examine the abdominal cavity only, but the lungs, inspected through the diaphragm, were found nearly collapsed. The bladder presented the normal appearance, not even exhibiting blood-staining. The left kidney was removed for inspection, and when subsequently examined was found to present in its interior, at one extremity, a dark ecchymosed appearance, which extended perhaps over one-fifth of the organ, and this part was somewhat softened. The hemorrhage had no doubt occurred from this part. The remaining organs of the abdomen, cursorily examined, seemed healthy, but the right kidney was not properly inspected.

Remarks.—Poor health of the mother during gestation is one of the admitted causes of purpura hæmorrhagica in the new-born. The dyscrasia to which purpura occurring in the first weeks of life is due, is in a large proportion of cases syphilitic. In this case, however, it is certain that there was no syphilis; but the mother's health had been impaired by hard work, frequent child-bearing, and the anti-hygienic conditions in which the family lived. Hemorrhage in purpura of the new-born is apt to occur from the umbilicus, at the time of the separation of the cord, since from the feeble coagulability of the blood the umbilical vessels are apt to remain open, or but partially plugged. That it did not thus occur in this case, was probably due to the fact that the renal hemorrhage began so early, that when the cord had separated there was less fulness of the vessels and a feebler circulation.

It is not improbable that the tonic spasms were due to extravasation of blood in the spinal canal. For the cause of the purpuric extravasations and hemorrhages there must evidently be an altered state of the blood or blood-vessels. MM. Andral and Gavarret, in two analyses of purpuric blood, found a diminution in the fibrin, and the fibrin that is present appears less coagulable than in healthy blood, so that the clots which form when the blood is stagnant are small and soft and slowly produced. In a few examinations with the microscope which I have made of purpuric blood, certain of the blood corpuscles seemed to me somewhat shrivelled and irregular, when there had been no evaporation of serum, but in other specimens this appearance was not observed.

Have the walls of the blood-vessels in purpuric patients undergone any molecular change by which they have become more brittle, and therefore more easily ruptured? This is a point to which too little attention has been given, and little is therefore known in reference to it. Although blood corpuscles may transude through the walls of the minute vessels, a free hemorrhage like that in the case detailed above would not be likely to occur except from a rupture. Hillier, commenting on a case of purpuric hemorrhage which he treated, and in which there had been long-continued suppurative inflammation of the bones, suggests that the walls of the vessels may have been weakened by waxy degeneration, but he did not have an opportunity of ascertaining the correctness of his opinion, as the patient improved.

Purpura, as I have observed it, has occurred most frequently under the age of two years, and as a consequence of some exhausting disease, or of manifest anti-hygienic conditions. It is not rare in the families of the city poor, and is most frequently met in foundling hospitals. It occurs especially after protracted entero-colitis, and certain of the eruptive fevers. Thus I have at present under observation a nursing infant of eight months, pallid, but not greatly emaciated, who has purpuric blotches upon the forehead, trunk, and all the limbs, there being in certain of them so much extravasated blood that the skin is distinctly elevated, and pressure with the finger gives the sensation of nodules. The apparent cause of the purpura is a sub-acute entero-colitis of three or more weeks' duration.

It is seen from the thermometric examinations in the above case, that the temperature was uniformly elevated above that of health. Febrile action has been repeatedly observed in cases of purpura hæmorrhagica, but it does not appear to be always present in this disease. It is probably of an irritative character. The nearly collapsed state of the lungs was, no doubt, referable to the feebleness. In feeble infants there is seldom full inflation of the lungs, and if death occur from exhaustion in those only a few days old, collapse of these organs, more or less complete, will be found at the autopsy. I have sometimes observed collapse under these circumstances, when I had reason to think that the lungs had previously been inflated. Purpura hæmorrhagica in the infant, though a grave disease, is by no means necessarily fatal. Patients not unfrequently recover through an improvement in their hygienic conditions, and the internal use of small doses of turpentine and iron.

CASES OF GANGRENE OF THE MOUTH.

Dr. Smith also exhibited specimens of gangrene of the mouth, with the following histories:—

Case I.—Male, 3 years old. The eruption of measles appeared June 12, and in the last of June pertussis commenced. Became emaciated. Offensiveness of the breath was first noticed July 28, and death occurred August 3.

Autopsy.—Body wasted. Both sides of pharynx gangrenous; also velum palati; the gangrene involved the gum around the molars on the left side, also the posterior half of left cheek. It extended down the pharynx half an inch below the level of the epiglottis; gangrene also at base of tongue, but epiglottis not involved; larynx and trachea healthy; bronchial tubes slightly injected and containing muco-pus. The lungs are free from inflammation, but the right middle lobe, margin of the right lower and tongue-like process of the left upper lobe are collapsed. Both lungs readily inflate. The highest temperature during the measles was 102°, during the gangrene 104°; most frequent pulse during the measles 140, during the gangrene 164. There was considerable dyspnœa in the last two or three days from the tumefaction around the larynx. Hence the pulmonary collapse.

Case II.—Male, one year and two months old. Eruption of measles appeared June 1st; recovered in the usual time, but had diarrhœa constantly afterwards. The

gums around the incisors, above and below, began to ulcerate about August 15, and within a week gangrene commenced. Died August 30.

Autopsy.—Both cheeks of a purple gangrenous color from the chin to the eyes. The swelling has considerably subsided since death. On the right cornea is a gray circular ulcer two lines in diameter, and the whole cornea is cloudy. This was observed some days before death; pupil of this eye contracted, of other eye dilated. All the incisors of the upper jaw, and the incisors and one bicuspid of the lower jaw have fallen out, and the corresponding portions of the maxillary bones are denuded of periosteum and jagged. The periosteum is also destroyed to a considerable distance beyond. The cheeks are infiltrated and œdematous. Trachea and bronchial tubes of normal appearance, but containing mucus. Numerous minute transparent tubercles disseminated through both lungs; part of right middle lobe collapsed; posterior superior and posterior inferior portions of left lower lobe in a state of cheesy pneumonitis, with intervening healthy parenchyma; part of the cheesy substance had softened.

These cases present certain points of interest. Measles is regarded as one of the most frequent causes of gangrene of the mouth, but it has seemed to me that gangrene occurring as a sequel of this disease is often more due to complications or sequelæ to which measles is especially liable than to the primary disease itself. In the two cases now presented, we see potential causes of the debility which predisposes to gangrene, apart from the measles, namely, protracted diarrhœa, pertussis and cheesy pneumonitis. The cheesy disease of the lung in the second case, no doubt, dated back to the measles, and according to the doctrine of the production of tubercles now held by pathologists, the minute tubercles in the lungs, which were evidently very recent, originated from detached particles of this softened substance. There were no tubercles in other organs.

Correspondence.

A CAUSE OF ENURESIS, DYSURIA, AND MASTURBATION IN BOYS.

My Dear Sir:—About two years since, a gentleman, who was present during my attendance in the Department of Diseases of Children, at the Bureau of Medical and Surgical Relief for the Out-Door Poor, at Bellevue Hospital, directed my attention to adhesions which existed between the glans penis and the inner surface of the prepuce of a boy whose mother complained that he "wet the bed." Since that time nearly every month has brought me, at the above dispensary, a case of nocturnal incontinence of urine, or of dysuria, and I have in nearly every instance, thus far, found adhesions, greater or less in amount, existing between these two surfaces. When these adhesions have been small in extent, they occurred most commonly on the sides of the glans, but I have seen several cases in which the whole inner surface of the prepuce, excepting the deepest portion of the fold, or that covering the corona glandis, has been adherent. In the latter class, when the adhesion has existed for some time, collections of smegma, to an extent sufficient to form masses the size of small beans, are to be found in the folds of the mucous membrane, and by a little manipulation may be slid about under the free portion of the prepuce from one point to another. In many cases this adhesion extends quite to the preputial orifice, and a superficial examination would lead one to suppose that the inability to retract the prepuce depended upon constriction of this orifice, or phymosis; while a little more care would make the adhesion of the two surfaces apparent.

I had inferred the cause to be want of attention to cleanliness. Foreign matter being allowed to accumulate at this point, abrasion or ulceration of the mucous surfaces taking place, and adhesion following; but in examining the prepuce and glans in the cases of still-born children, I have found these epitheliar adhesions present, and am led to presume that the real cause is the persistence of the fœtal state of these parts.

I have found this condition existing in boys at the breast, in those of nine or ten years, and at intermediate ages. In one child, just old enough to walk, the constant irritation of the retained smegma kept the penis in a state of almost constant erection, and made micturition frequent and painful. His inclination to pull at the organ led his mother to believe that he had been taught "bad practices" by other children.

These cases have been very readily cured by simply rupturing the adhesions, clearing out the retained smegma, and preventing readhesion, by the use of some kind of cerate or ointment. It has also been advisable, in some cases, to give a tonic to aid in the restoration of the child's health, which has generally suffered, either from the effect of this irritation upon his nervous system, or from the dosing he has undergone "to kill the worms," from his treatment with belladonna, iodine, bromide of potassium, or chloral, etc.; from being deprived of water, and wakened during the night to empty his bladder; as well as from the numerous scoldings and whippings by which he has also suffered.

It has sometimes been convenient to use the fenestrated end of a probe to assist in rupturing the band of adhesion, either by slipping it behind, when an opening could be discovered, or by scratching through the junction while the prepuce was strongly retracted. I have rarely found it necessary to perform circumcision to enable me to completely uncover the glans, when these adhesions were once torn through.

To whom the credit belongs of first noticing this cause of enuresis, dysuria, and masturbation, I do not know. The gentleman who pointed it out to me had learned it of a physician who, like myself, had a dispensary service in this city. I find no mention made of it in such works on general medicine or surgery or diseases of children as I have consulted; some of the writers on the subject declaring that nocturnal incontinence of urine is, in many cases, almost incurable until after puberty, which is easily comprehended when we suppose the above cause to have been the one in existence.

Yours very truly, F. A. Castle.

687 Lexington Avenue, New York City.

THE MEDICAL REGISTER AND THE MEDICAL PROFESSION.

To The Editor of The Medical Record.

Sir:—Your remarks on the subject of the "*Medical Register* and the Profession" have called to my mind many grievances connected with the plan followed out by this self-constituted tribunal of a few of the young medical men of this city. I am pleased to say, in the beginning, that I have not been either accidentally or purposely omitted from the list of "respectables," and for myself I have nothing to complain of. But with others with

whose cases I have become acquainted, the matter stands in a different light. There are some who I am convinced should be in the list who are purposely and defiantly left out by vote of a clique of young men, who boast by their actions that they can do anything they please.

Your correspondent is one of those who believe in an authoritative list of practitioners, and who believe that such a list cannot be made under sanction of law, as in other civilized countries. The professional man shrinks from extra-professional labors, and we cannot expect others than young men to do clerical work; but is it right to trust entirely to the discretion of our juniors in matters of such importance as registration? Must we accept all these decisions of such gentlemen without question? We virtually do so by accepting the *Register* as an authoritative *exposé* of the respectability of the profession. We cannot expect perfection, but I claim that we should have that approach to an intention which should insure on the part of one seeking redress something akin to civility. The real object of this *Register* is to be a guide for the profession. That is what every one wants, but is it such a guide? I know of not a few gentlemen of this city who will not consult with another practitioner who is not in the list. In the main, this is proper, but when we find that this name and that name is omitted by the merest accident, who can tell how much harm might be done to such a sufferer? But allow me to come to particulars. By a vote of the Medico-Historical Society, it was agreed that no one should be in the list of respectables who kept drug-shops. Why this particular rule was passed does not appear, except that the Society wished to show how far it could go in its dictatorial, uncompromising, and presumptuous spirit. What was the result? Very many names disappeared, and quite a number said that only a few would consult with them. One case came to my notice of a young practitioner whose practice in the beginning was not sufficient to support him, and he kept an apothecaries' shop. It was, if you please, a "matter of bread and butter" with him. I will go further by saying that this gentleman was only a silent proprietor, and yet because he did not give up his shop he was not considered respectable. This is certainly like "cutting off the head to cure squinting," an original operation proposed by Sam Weller.

You are pleased to say that the Medico-Historical Society should be encouraged. No one objects to this. But let it show a disposition to take suggestions. For one, I should like to know what its standard of merit is. One year a name is inserted, and the next year it is left out. We may call these the oscillators, who may not be able to please the members of the Society two years in succession. May be, however, the standards of respectability voted by the Society vary from time to time, and to be consistent with their inconsistency they must act accordingly. How can we reconcile this behavior with an expressed intention to be accurate, impartial? Does it not show that the self-constituted authorities of this Society have a little too much to look after, and that the Editor and the Publication Committee are beginning to prove that they are out of their depth? Would it not be a good idea for the profession generally to know the exact standard to be reached to insure a place, and then we can all know how to behave ourselves? Who knows that some of those who, from a culpable ignorance of the exact ideal of a perfect man entertained by the Executive Committee of this Society, may not be left out in the cold next year "without friends and without influence?"

In conclusion, I cannot escape a conviction, forced upon me by an observation extending from the very inception of the movement of registration, that the profession generally are leaving in the hands of a clique a dangerous power. I say all this with no reason to complain on my own account for having been misused, or treated in any but a courteous manner by the editors or their committees.

Respectfully, your obedient servant, P.

New York, Oct. 6, 1872.

To The Editor of The Medical Record.

Sir:—I read the letter of * * * *, upon which you have based your last editorial, with not a little surprise. It is a matter which interested the correspondent more than any one else, and although I confess he was misused, but as it was not intentional, the Editor and the Society cannot lose confidence with the profession. It would certainly be absurd to suppose that such mistakes could always be avoided. In your own case is an example of such. I think we should all be willing to be charitable to gentlemen who strive to do us so much good. Their efforts in this direction are, as far as I have observed them in the district in which I reside, very praiseworthy. I know of one gentleman, who acted as canvasser for the Society in a sparsely settled district, calling upon one medical gentleman six times within a fortnight before he could find him in, it being a rule with said gentleman (as with others, I believe) to see the credentials himself, and satisfy himself that everything was right. I take the *Register* as my authority, and although I am willing to allow for all mistakes, it is hard to convince me that they were not made purposely, the assertions of the "Omitted One" to the contrary, notwithstanding.

Yours truly, Brooklyn.

Oct. 10, 1872.

To The Editor of The Medical Record.

My Dear Dr.:—I am with you, and all other well-wishers for the welfare of our profession, in favor of medical registration as a very laudable and justifiable means to an end. But every one knows that when we go a little farther than wishing, and commence to do, the real difficulties stare us in the face. This seems to be the case with the *Medical Register*. We must all confess that there are a great many shortcomings and misadventures in an enterprise calculated to meet the wants of every caviler for propriety, and every stickler for individual rights. The surprise is that the *Register*, by dint of perseverance in this very line, in striving to please, in endeavoring to do everything which it believes to be right and straightforward, has succeeded so well. So much for the book as a book. In the interests of the cause it represents, all must have concern enough to aid it in every way in his power. I for one am anxious to do this, but in order that I may act intelligibly, I must first be assured that the membership to a medical society is all that is required to find admission to the *Medical Register*. Without attempting to dispute your authority on the point, I beg to enclose the following memorandum, which bears upon the remedy which you have proposed:— * . . . . . .

Here are the names of gentlemen who are entirely ignored in the list of physicians, and who are yet members of the most respectable medical societies in New York. One of these is a member of no less than three of the recognized associations, and we look in vain for

[* The names of the gentlemen are omitted, for obvious reasons. We can, however, vouch for their genuineness.—Ed.]

his name anywhere else. I can assure you that this has been no oversight of the Society, no slip of the pencil of the Editor—in fact nothing for which any apology is attempted. My authority for this statement is a member of the Medico-Historical Society, who is proverbially careful of what he says. It would appear that this single and wilful departure from a rule which would be considered safe by most every one, destroys a principle.

Yours, etc., JOHN PLAYFAIR, M.D.

NEW YORK, Oct. 1872.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from September 19, 1872, to October 4, 1872, inclusive.

EDWARDS, L. A., Surgeon.—By S. O. 227, War Dept. A. G. O., Sept 25, 1872, to report in person on Oct. 2 next, to the Commanding General, Department of the Lakes, for assignment to duty.

GODDARD, C. E., Surgeon.—By S. O. 184, Dept. of Dakota, Sept. 16, 1872, relieved from duty at Fort Rice, D. T., upon arrival of Assistant Surgeon Williams, and to comply with S. O. 167, C. S., War Department.

WILLIAMS, J. W., Assistant Surgeon.—By S. O. 184, C. S., Department of Dakota, assigned to duty at Fort Rice, D. T.

NOTSON, WM. M., Assistant Surgeon.—By S. O. 101, Department of the Lakes, Sept. 26, 1872, granted leave of absence for thirty days.

WATERS, Wm. E., Assistant Surgeon.—By S. O. 218, War Department, A. G. O., Sept. 18, 1872, relieved from duty in Department of the East, and to report in person to the Commanding General, Department of the Missouri, for assignment.

BREWER, J. W., Assistant Surgeon —By S. O. 151, Department of the Mo., Sept. 18, 1872, relieved from duty at Fort Harker, and assigned to duty at Camp Supply, Ind. T.

GARDNER, W. H., Assistant Surgeon.—By S. O. 155, Department of the Mo., Sept. 26, 1872, assigned to duty with troops constituting garrison of Fort Riley, Kansas, to proceed to Camp 6th Cav'y, near Fort Hays, Kansas, to report to the Commanding officer for duty.

JESSOP, S. S., Assistant Surgeon.—By S. O. 155, C. S., Department of the Mo., relieved from duty with 6th Cav'y, and assigned to duty at Fort Selden, N. M.

VICKERY, R. S., Assistant Surgeon.—By S. O. 158, Department of the Mo., Sept. 30, 1872, when relieved by Assistant Surgeon De Hanne, to comply with S. O. 205, C. S., War Department.

DE HANNE, J. V., Assistant Surgeon.—By S. O. 158, Department of the Mo., Sept. 30, 1872, relieved from duty as attending Surgeon at these Headquarters, and assigned to duty as Post Surgeon, Fort Wingate, N. M.

BROWN, H. E., Assistant Surgeon.—By S. O. 224, War Department, A. G. O., Sept. 23, 1872, directed to leave New Orleans, La., on October 10 next, and to proceed to Washington via New York City.

DELANY, A., Assistant Surgeon.—By S. O. 155, C. S., Department of the Mo., when relieved by Assistant Surgeon Jessop to comply with S. O. 205, C. S., War Department.

COWDREY, S. G., Assistant Surgeon.—By S. O. 151, C. S., Department of the Mo., relieved from duty at Camp Supply, Ind. Ty., and assigned to duty at Fort Larned, Kansas.

REYNOLDS, F., Assistant Surgeon.—By S. O. 113, Department of the Columbia, Sept. 11, 1872, to report in person to the Attending Surgeon, Portland, Oregon, for medical treatment.

ASCH, M. J., Assistant Surgeon.—By S. O. 224, War Department, A. G. O., Sept. 23, 1872, granted extension of leave of absence until March 31, 1873, and his resignation accepted by the President, to take effect March 31, 1873.

Medical Items and News.

CLINICAL LECTURES ON VENEREAL, GENITO-URINARY, AND SKIN DISEASES AT THE NEW YORK DISPENSARY.—A course of clinical lectures will be delivered on Venereal, Genito-urinary, and Skin Diseases, by Dr. M. H. Henry, at the New York Dispensary, during the coming winter months. The large number of patients constantly under treatment at this Institution affords an excellent opportunity for observation and special instruction in this important branch of surgery.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The first object of this new organization is to secure reasonable and practicable methods of sanitary administration, and to bring the best results of study and experience into the common stock of the Body, which invites the contribution of such results from every competent source. The second object is to promote the diffusion and practical uses of sanitary knowledge. The following are the officers of the Association :—

President, Stephen Smith, M.D., of New York.

First Vice-President, Edwin M. Snow, M.D., of Providence.

Second Vice-President, C. B. White, M.D., of New Orleans.

Treasurer, John H. Roach, M.D., of Chicago.

Secretary, E. Harris, M.D., of New York.

The following named gentlemen, with the officers, constitute the *Executive Committee*:—Dr. Francis Bacon, of New Haven; Dr. Wm. Clendenin, of Cincinnati; Dr. C. C. Cox, of Washington, D.C.; Dr. Henry Hartshorne, of Philadelphia; Dr. Moreau Morris, of New York; Dr. John M. Woodward, Washington, D.C.

The next meeting of the Association will be at Washington, D.C., during the last week in February, 1873, when the chairmen of twenty-three committees are expected to report.

COLLEGE OF PHYSICIANS, PHILADELPHIA.—The report on the "Annual Museum for the Exhibition of the American Medical Association in Philadelphia, and the Contributions from California," read by Thomas M. Logan, M.D., President of the American Medical Association, before the Sacramento Society for Medical Improvement, gives the following particulars: The appropriate building belonging to the College of Physicians, where the museum was held during the late session of the American Medical Association, contains the valuable library and museum of the college, the former greatly enhanced by the donations of Samuel Lewis, and by a bequest of the collection of the books of the late Mr. George Ord, consisting of about 15,500 volumes; the latter contains as its nucleus the museum of the late Dr. T. D. Mutter, who bequeathed a sum of money for the endowment of an annual course of lectures on subjects relating to surgical pathology. The officers of the college for 1872 are:—*President*, Geo. B. Wood, M.D.; *Vice-President*, Geo. W. Norris, M.D.; *Secretary*, John

H. Packard, M.D.; *Recorder*, J. Ewing Mears, M.D.; *Treasurer*, J. Rodman Paul, M.D.; *Librarian*, Robert Bridges, M.D.; *Censors*, Drs. Isaac Hayes, Jos. Carson, Lewis Rodman, Edward Hartshorne; *Councillors*, Drs. S. Sittell, Alfred Stillé, W. S. W. Ruschenberger, C. Morris, E. Wallace, Jas. H. Hutchinson.

The following Societies meet in the College building: The Pathological Society, of Philadelphia; The Obstetrical Society, of Philadelphia; The Ophthalmological Society, of Philadelphia; The Philadelphia County Medical Society.

The Journal Association consists of Fellows of the College who have subscribed for American and foreign medical journals, for the benefit of the library of the Institution.

California Contributions to the Annual Museum. Dr. Thomas M. Logan, in his report to the Sacramento Society for Medical Improvement, alludes, with cuts, especially to the following practical contributions, by Californians, to the Museum in connection with the late meeting of the American Medical Association, held in Philadelphia. Dr. H. W. Nelson's splint, and its novel adjustment for fracture of the pelvic bones. The tracheotome of Dr. A. B. Stout, of San Francisco, with its accessories. The neat and ingenious instrument for the treatment of fracture of the inferior maxillary bone, contributed by Dr. R. W. Murphy, of Sacramento. The pathological specimen, from Dr. L. McGuire, of Folsom, of fibroid infiltration of the pylorus, or the plastic livitis of Brinton.

Opium-selling in Sandwich Islands.—Recently, in these islands, the privilege of selling opium for one year was bid off at auction for the sum of twenty-one thousand dollars.

Apothecaries.—The first apothecaries lived at Naples. By the edict of Frederick II., it was required "that the confectionerii should take an oath to keep by them fresh and sufficient drugs, and to make up medicines exactly according to the prescriptions of the physicians." The first mention made of an English apothecary occurs in the reign of Edward III., who, it is said, bestowed, in the year 1345, a pension of sixpence a day on Coursus de Gangeland, an apothecary of London, for taking care of and attending his Majesty during his illness in Scotland. They were established in France and Germany about the time they were introduced in England. There was no apothecary's shop in Halle till the year 1493.

Feuerbach.—Louis Marie Feuerbach, the great German philosopher, died September 17, 1872, at Hanau, Hesse Cassel, aged 69.

Buffalo Insane Asylum, N. Y.—The corner-stone of this new asylum was laid with appropriate ceremonies, Sept. 18, 1872. M. W. Christopher G. Fox, the Grand Master of Masons of this State, officiated. Addresses were made by Gov. Hoffman and Hon. James C. Putnam.

Small-pox in South America.—The Department of State, at latest advices, is in receipt of information that the small-pox was prevailing to an alarming extent in the Republics of Peru and Chili, the deaths being 200 weekly at Santiago, out of a population of 250,000, and 300 weekly at Valparaiso, out of a population of 150,000. It is also reported that the disease is very severe at Iquique, Peru, and that it has reached Callao.

Cholera in Persia.—A despatch from Teheran reports that the cholera is raging with violence in Bokhara. It is estimated that 1,000 persons are dying daily from the scourge.

Bousquet.—Dr. Bousquet, one of the greatest advocates of the Jennerian doctrines in France, died recently, aged 76.

Gross.—Dr. Gross, of Philadelphia, the justly celebrated surgeon, was once dangerously ill. Shortly after his recovery he met one of his lady patients, who remarked to him, "Oh, doctor! I rejoice to see that you are out again; had we lost you, our good people would have died by the dozen."—"Thank you, madam," replied the affable doctor, "but now I fear they will die by the *Gross!*"

Louis.—This distinguished French physician died recently, in the 86th year of his age.

Snake-bite in India.—In the Punjab, during the month of May, 62 deaths occurred from snake-bites and wild animals. The population of this country is about 95,000,000.

Simon.—The University of Munich, on its four hundredth anniversary, conferred the honorary diploma of Doctor in Medicine on Mr. Simon, F.R.S., D.C.L.

Cholera and Dengue are very prevalent in India. There were 1,072 deaths from cholera in the Punjab, in the month of May.

Royal College of Physicians, London.—The Council Examiners of this institution for the ensuing year are: Midwifery, John Braxton Hicks, M.D., F.R.S., and Wm. S. Playfair, M.D.; Surgical Anatomy and the Principles and Practice of Surgery, Campbell De Morgan, F.R.S., and Geo. W. Callender, F.R.S.; Anatomy and Physiology, Frederick W. Pavy, M.D., and John Burdon Sanderson, M.D., F.R.S.; Chemistry, Materia Medica, and Practical Pharmacy, Alfred S. Taylor, M.D., F.R.S., and Wm. H. Dickinson, M.D.; Medical Anatomy and the Principles and Practice of Medicine, Herbert Davies, M.D., and George Johnson, M.D., F.R.S.

Death of a London Surgeon.—Alfred Poland, F.R.C.S., Surgeon to Guy's Hospital, died lately. Many valuable articles in "Holmes's System of Surgery" were contributed by him. He was for quite a time the editor of "Guy's Hospital Reports."

Destruction of the Northern Ohio Lunatic Asylum.—This institution, located at Newburg, seven miles from Cleveland, Ohio, was nearly destroyed by fire September 25, 1872. There were about 600 inmates. Several were badly burned, and four citizens were buried in the *débris*. The loss will probably amount to about $300,000, on which, it is said, there is no insurance.

The Oldest Woman in Philadelphia.—"Aunt Margaret," a colored woman who had reached the advanced age of 115 years, died September 18, 1872, in Philadelphia. She had lived in the third story of a house for about fifteen years, and was not known to have left her room during that time.

The Prevention of Sea-Sickness.—Mr. Henry Bessemer, whose name is so intimately associated with the manufacture of steel, has devised a scheme for doing away with the horrors of the Channel passage between England and France—the chief terror in a voyage to Europe to those who cannot help being sea-sick. It is the suspension, on the steamer, of a large circular saloon on axles, with machinery designed to overcome all movements in either direction from oscillation, from the waves or from other causes, so that the floor shall be kept horizontal in all conditions. It is stated that eminent engineers, who have examined the details of the invention and seen the model at work, have expressed their full belief in the practicability of the plan.—*N. Y. Observer.*

Original Communications.

RUPTURE OF THE BLADDER FROM RETENTION OF URINE

DUE TO STRICTURE OF THE URETHRA.

WITH CASES AND REMARKS.

By J. W. S. GOULEY, M.D.,

SURGEON TO BELLEVUE HOSPITAL, NEW YORK.

Rupture of the bladder, though an extremely rare accident in consequence of retention of urine from urethral obstruction, will here form the topic of a few remarks and suggestions, based principally upon the observation of two cases of this lesion which came to my notice at Bellevue Hospital within five months of each other.*

Case I.—John S——, aged sixty, was admitted to Bellevue Hospital June 13th, 1870. This man was muscular and of large frame. He denied having ever contracted venereal disease, and asserted that he had received no injury of the genitals. Twelve years before, however, he had a retention of urine of thirty-six hours' duration, of which he was relieved spontaneously, catheterism being unsuccessful.

When he entered the hospital, he walked up to his ward without assistance, and stated that he had passed no urine for three days. Examination of the parts revealed extravasation of urine in the scrotum, penis, and perinæum, which were much swollen and of a dusky red color, the extravasation having taken place twelve hours after the beginning of retention. On the glans penis there was a well-marked indurated cicatrix. Though the bladder had risen to the level of the umbilicus, the patient complained of no pain, his countenance bore no marks of suffering or of anxiety, and his pulse was ninety-four and full. A short time after his admission, a No. 8 flexible catheter was passed down the urethra to a point seven inches from the external orifice, where it was arrested; No. 2 bulbous bougie stopped at six and three-quarter inches; No. 4 encountered an obstruction at seven inches, overcame it and went three-quarters of an inch beyond. A filiform bougie could not be introduced past the latter point. Two hours after this examination, ether was administered with the view of making another trial at catheterism. The patient became greatly excited, and during one of his struggles the abdominal tumor suddenly disappeared, and the former area of dulness became tympanitic. Catheterism again failed. There were no symptoms of collapse; the pulse remained as before. Four hours later the integuments of the penis and scrotum were freely incised, a poultice applied, and an opiate given. Pulse 104 and feeble. From this time the patient made no motion nor any sound to attract the attention of his nurse, and was found dead a few hours after the incisions had been made. I did not see him during life, but had the good fortune of witnessing the autopsy, which proved extremely interesting. There were in the abdominal cavity five pints of bloody urine, and a very slight glutinous exudation on the visceral peritonæum. The bladder was large, its walls were of normal thickness, and its cavity contained a little urine. At the upper fundus, posteriorly, there was a laceration half an inch in length, involving the peritonæum—there being no signs of ulceration. The penis, scrotum, and the tissues in and around the perinæum were infiltrated with bloody urine. Near the bulbo-membranous junction there was a slight constriction of the urethral canal, and just behind this point the urethra was *torn completely across*. The kidneys were fatty and granular.

Remarks.—The first question that arises, in the consideration of this case, is whether the retention of urine was the result of the stricture which was permeable to a No. 8 instrument, or whether it was not caused by the laceration and consequent retraction of the severed urethra. There is no doubt in my mind that the latter is the more probable solution of the mystery, especially if it be noted how little dependence can be placed upon the testimony of a man who, having the remains of a chancre upon his penis, denies that he has ever contracted venereal disease or has ever had a sore upon his privates. There is every evidence that this man had received a severe contusion of the perinæum, and that he probably had a motive in concealing the fact. He might have sustained an injury from the hand of some person whom he did not wish known, or possibly had been hurt during a drunken brawl, and had no recollection of it. However this may be, the autopsy proved beyond a doubt that there was a complete laceration of the urethra at the bulbo-membranous junction. In his case, this could only have occurred from contusion of the perinæum; and it is well known that such an accident soon leads to retention and extravasation of urine. The laceration of the urethra explains the discrepancy in the measurements, and also the failure of catheterism. The No. 8 gum catheter reached a greater depth than No. 2, simply because, being more resisting, it forced its way farther out of the canal into the neighboring connective tissue. None of the bougies passed ever entered the retracted vesical end of the urethra.

The second question relates to the vesical rupture. Judging from the duration of the retention (three days) and from the degree of distention, the bladder must already have become atonied. A good evidence of the correctness of this view is, that the man suffered no pain at the time of his admission, and was able to walk up stairs. Consequently the rupture of the bladder was not the result of straining in micturition, but was caused by violent contraction of the abdominal muscles during the patient's struggles while undergoing etherization. I think that any other anæsthetic agent would probably have had the same effect. The first wrong was to give any anæsthetic at all, the second was to delay treatment. The indications for immediate surgical interference were clear. There was a man whose bladder was distended to the umbilicus, who had not made water for three days, and who for two days had all the signs of extravasation of urine in the perinæum and scrotum. Should there have been a question about the propriety of making free incisions to *relieve tension?*

The duty of the young practitioner, in such circumstances, is to meet the immediate demands of the case, *i. e.*, to relieve tension and to provide for the escape of urine, if he does not wish to take the entire responsibility of managing the case to its end. The patient should at once be firmly held in the lithotomy position—but should take no anæsthetic—and, with a sharp scalpel, a clean incision should be made in exactly the median line of the perinæum, extending from the scrotum to within an inch of the margin of the anus, and involving all the tissues down to the urethra. This would give free egress to the urine, and leave the patient in the best condition for any operative process that might be decided upon after consultation. If such a plan had been pursued in the case under discussion, there would have been no rupture of the bladder.

* Both these cases were published by Dr. Thomas H. Cruse, in a paper on "Rupture of the Bladder dependent on Stricture of the Urethra as a primary Cause." See Medical Record, Vol. 6, No. 11, p. 241, Aug., 1871.

Case II.—Charles D——, aged 36, admitted to Bellevue Hospital, October 31, 1870. Had two attacks of urethritis; the first, ten years, and the last, two and a half years before admission, but otherwise had enjoyed good health, and was temperate. For two years prior to his entry into hospital he suffered from dysury and from other symptoms of advancing stricture. On the 29th of October, at 6 o'clock A. M., he urinated without help, and at 10 A. M., while straining, felt "something give way within him," and experienced severe pain in the whole abdomen. There were no other symptoms, and he was able to walk and call upon a medical man, who introduced a catheter and drew from him six ounces of urine. The patient received no further treatment until his admission to Bellevue Hospital, when it was ascertained that he had not made water for forty-two hours. He then lay upon his back with the knees drawn up. The abdomen was tympanitic, tender, and painful; pulse 72.

Exploration of the urethra: Bulbous bougie No. 13 was arrested at two and a half inches from the meatus; No. 10, at three and a half; and Nos. 3 and 2, at six inches. A capillary whalebone bougie was introduced, and over it a tunnelled catheter, and six ounces of clear urine drawn off, but without affording much relief. Ordered a turpentine stupe, and one-quarter of a grain of sulphate of morphia every two hours.

My term of service expiring, I turned the patient over to my successor for the ensuing two months, Dr. Stephen Smith, through whose courtesy I was enabled to see the man every two or three days to the termination of the case.

November 1.—The patient passed a sleepless night, but in the morning was found in good general condition. Tongue moist; pulse 108; tympanitis undiminished. Tenderness most marked in the inguinal regions. Filiform bougie and No. 7 gum catheter; six ounces of limpid urine drawn, and the instrument retained in position. Catheterism was difficult on account of an existing false route on the left side of the upper urethral wall. General symptoms the same. Pulse 104 and full. Morphia continued. On the next day there was, in addition to the great distention of the abdomen, an appreciable redness, with extreme tenderness, in the right iliac fossa; pulse 108 and weak. No urine passed through the catheter for seven hours. The instrument having been taken out to be cleansed, a No. 6 was substituted. Eight ounces of urine were drawn, and the catheter retained as before. The morphia was continued, and milk punch ordered. To relieve tension, several small incisions through the skin and superficial fascia were made in the hypogastric and inguinal regions, and a poultice applied.

On the fourth day, his general condition was good, and he was free from pain. Pulse 108; respiration 20. More incisions were made at points where there was tension. The retained catheter, though withdrawn and washed daily, had already given rise to much urethral and vesical irritation.

On the sixth day, his pulse was 96, his respiration 18, and he passed through the catheter sixteen ounces of clear alkaline urine.

On the seventh day he was very hopeful, and apparently in good condition. There was a notable diminution in the size of the abdomen. In the morning the pulse was 84, and the respiration 24. In the evening, pulse 108, full and soft. No. 9 gum catheter retained. Morphia continued.

On the eleventh day the instrument wa swithdrawn on account of troublesome cystitis and urethritis, and, by advice of Dr. Smith, a catheter was introduced every two hours. In the evening, during catheterism, the patient experienced a sudden pain in the bladder, followed by a few drops of blood. On the occurrence of this accident, the catheter was retained as before. Morphia suspended.

On the twelfth day, though he had a free stool, the tympanitis began again to increase. Pulse 96. Urine passed freely through the catheter. In the lower part of the hypogastric region there was an indurated and painful mass—the beginning of an abscess. Slight diarrhœa.

On the thirteenth day he had a chill, followed by fever and sweating. The catheter being clogged, was withdrawn, cleansed, and replaced. Ordered quinine and tincture of the chloride of iron.

On the fourteenth day he felt easy. Catheter withdrawn and passed every two hours. Urine ammoniacal and glairy.

On the eighteenth day he was allowed to micturate without assistance. Urine flowed in a good stream and without pain.

Nineteenth day. Micturition, accompanied by a slight pain in the bladder. Sweating profusely. Tumor of abdomen softening. During the night, micturition painful and very frequent. On the next morning the catheter was introduced and retained. The patient thought he experienced relief from the presence of the catheter.

Twenty-fifth day. On the previous night the patient removed the catheter, which was clogged. There was then some straining in micturition, and pain referred to the right iliac region. Epididymitis on the left side.

Twenty-ninth day. The abscess, which was pointing a little above the situation of the right abdominal ring, was freely opened, and discharged a quantity of fetid pus mixed with urine. Urine dribbled constantly through the opening, none escaping by the meatus urinarius. Catheter again retained.

The urine continued to flow from the mouth of the abscess, the lips of which were ragged and indurated. The catheter was finally removed. The patient was tortured with constant vesical tenesmus, nausea, hiccough, and delusions. He then failed rapidly, and died on December 13, the forty-fourth day after admission and the forty-sixth after the accident.

Autopsy.—Lungs, liver, spleen, and heart normal. Peritoneal cavity: Firm bands of adhesion between the anterior abdominal wall and the cæcum and sigmoid flexure of the colon. Kidneys: There was marked anæmia of the capillaries, both in the cortex and in the pyramids. Well-defined spots of interstitial nephritis. Intense pyelitis and uretheritis. Bladder: This viscus was contracted to the size of a small orange. Its walls were half an inch in thickness, the hypertrophy being especially marked in the muscular coat. Its mucous membrane was thrown into numerous columnar folds. The cavity of the organ was half filled with thick, chocolate-colored and intensely ammoniacal urine. The rupture was in the anterior wall, about the middle of the vertical diameter of the bladder, and a little to the right of the median line. The opening in the mucous coat was somewhat rounded, and large enough to admit the index finger. The muscular and fibrous coats showed a vertical laceration an inch in length. A probe passed through the laceration could be moved freely in all directions; and, on cutting down upon the instrument, through the abdominal wall, a cavity was seen which, commencing in front and to the right of the bladder, extended around to the left, beneath the peritonæum, and between the bladder and rectum. The walls of the cavity were tense, and it contained some

fœtid urine such as that found in the bladder. A probe, passed through the external hypogastric opening, entered the bladder through the laceration.

Remarks.—This patient succumbed from the effects of pyelitis and nephritis, caused by extension of inflammation from the bladder through the ureters. Was not this the result of the prolonged retention of the catheter? Would not the chances of recovery have been greater under a different plan of treatment? I was partly responsible for this case, and now regret that I did not operate within a few hours after his admission.

When the rupture occurs anteriorly, or at the lower part of the bladder, beneath the peritonæum, the lateral section of lithotomy should be made as recommended by Dr. Walker, of Boston; and, if there be a tight stricture, it should be included in the cut; but even the free perineal outlet is, I think, insufficient. A supra-pubic incision, as that for epicystotomy, should also be made, with a view of giving exit above as well as below to the extravasated urine. In the case of Charles D——, there was great need of an early supra-pubic incision, for nature finally almost established it.

Rupture of the bladder, in consequence of retention of urine due to stricture of the urethra, is of such uncommon occurrence, that out of seventy-eight cases of vesical rupture—sixty-seven of which were males—collected from various sources by Dr. Stephen Smith,* only four are reported as being "caused by stricture." Dr. Cruise gives the history of an additional case (fatal) of Sir Everard Home's, not incorporated in Dr. Smith's table. Dr. A. V. Williams reports a successfully treated case of rupture of the bladder from stricture.† These, together with the two cases that occurred at Bellevue Hospital, make a total of only eight—five having terminated fatally—which can be fairly attributed to stricture. In the majority of Dr. Smith's tabulated cases, the rupture was caused by external violence applied to the hypogastric region while the bladder was full.

The following analytical summary of seventy-eight cases of rupture of the bladder, borrowed from Dr. Smith's paper, will show at a glance the important features of this lesion from all causes.

Sex.—Males, 67; females, 11; making about six of the former to one of the latter.

Age.—Under ten, 3; ten to twenty, 3; twenty to thirty, 19; thirty to forty, 26; forty to fifty, 7; fifty to sixty, 4; above sixty, none; adults, 16, age not given.

Condition.—Bladder distended, 30, of which 10 were intoxicated; 5 from stricture,‡ intoxicated; condition not given, 14; parturition, 4; in good health, 4; doubtful, 2; no note of 24.

Causes.—Direct violence, 48; concussion, 15; internal causes, 9: of which 4 were parturition; 4, results of stricture: 1, retroversio uteri; no note of 6.

Primary Symptoms.—Severe, 59: of which 43 were ruptured into the peritoneal cavity; 2, not involving the peritonæum; 10, into cellular tissue; 3, not given. Slight, 9: of which 7 were into the peritoneal cavity; 1, indefinite; no note of 7. Inability to urinate, 28: of which 22 were into the peritoneal cavity; 1, not involving the peritonæum; 5, into the cellular tissue. Power to void urine, 3: 2, into the peritoneal cavity; 1, not involving the peritonæum. Power of locomotion, 7; all through the peritonæum. Felt a sensation as of the bladder bursting, 7.

Progress of Cases.—Severe symptoms continued in 48: of which 39 ruptured into the peritoneal cavity; 7, into cellular tissue; 2, peritonæum not involved. Severe symptoms set in, 10: in 1, three hours after the accident; 6, two days; 2, four days; 1, three days—all ruptured into peritonæum except last. In 1, power to urinate continued, the rupture being into cavity of abdomen. In 14, it came on: in 12 of these, on the second day; 9 being into the peritonæum; 2, not involving peritonæum; 1, into cellular tissue; in 1 on third day; in 1 on the fourth day. Locomotion continued in 2, both ruptured into peritonæum. Bloody urine drawn in 25; clear, in 4. Symptoms were mild in 2; both ruptured into cellular tissue.

Result.—Died, 73: within five days, 39; 26 being ruptures into the peritonæum; 9, into the cellular tissue; 3, not given. Between five and ten days, 22; 17, into the peritoneal cavity; 3, into cellular tissue; 2, not involving peritonæum. Between ten and fifteen days, 2; both into cellular tissue. Between fifteen and twenty days, 3; 1 into the peritoneal cavity; 2 into cellular tissue. Above twenty days, 2; both into cellular tissue; of which 1 lived forty-two days.

Recovered, 5: 3 into cellular tissue; 1, into peritoneal cavity; 1, partial.

Post-mortem Appearances of Viscera.—External marks of injury in 2, both ruptured into peritoneal cavity. No external marks of injury in 8: 7 ruptured into cavity of peritonæum; 1 not involving peritonæum. Fracture and injury of pelvis in 15: 11 ruptured into cellular tissue; 3 into peritonæum; 1 not given. Marks of inflammation in abdomen in 34: 27 being into the peritoneal cavity; 5 into the cellular tissue; 2 not involving the peritonæum. No marks of inflammation in cavity of abdomen, 7: 4 being ruptured into cellular tissue; 3 into cavity of abdomen.

Post-mortem Appearances of Bladder.—Rupture into cavity of peritonæum, 50; 39, the result of direct violence; 6, concussion or indirect violence; 4 from parturition; 2, stricture; 1, retroversio uteri. Rupture in the anterior wall of the bladder, 9; 5 being from direct violence; 3, concussion; 1, stricture. Rupture at neck, 6; 5 from direct violence; 1, not given; no bladder found, 2; bladder firmly contracted in 17.

I shall not discuss the question of pathology, as it has been so fully treated of by Drs. Smith and Cruise, except to say that I agree with the latter regarding "ulceration," which, I think, very rarely, if ever, precedes rupture; the last-named lesion being almost always a real laceration, unconnected with any previous ulceration. *In regard* to the *prognosis*, I should not, in the face of Dr. Smith's statistics, be willing to go so far as Sir Henry Thompson, who says that "a recovery has never been known to happen, and can scarcely be regarded as possible."*

Case 39, in Dr. Smith's table, which is also the fifth case cited by Dr. Cruise, is a fair illustration of recovery from rupture of the bladder due to stricture. The patient had retention three days while at sea; he was suddenly seized with severe pain in the region of the bladder, followed by great prostration. In four days the cellular tissue surrounding the rectum came away in sloughs. He was then received into the Seamen's Retreat (Staten Island, N. Y.), where he was seen by Dr. Ward, who reports that the hand could be passed up to the sacrum and surround the rectum; and

* A Contribution to the Statistics of Rupture of the Urinary Bladder, with a Table of Seventy-eight Cases. By Stephen Smith, M.D., Asst. Surgeon to Bellevue Hospital. Reprint from the *N. Y. Journal of Medicine*, March, 1851.

† *New York Medical Times*, January, 1855.

‡ One case being doubtful, is rejected.

* The Pathology and Treatment of Stricture of the Urethra, etc. 2d edition, London, page 268.

that two and a half inches above the anus there was a large opening in the anterior part of the rectum, through which all the urine was passed. The patient made a rapid and complete recovery.

Dr. A. V. Williams' case, of which the following is an abstract, is another instance of recovery from rupture of the bladder, due to stricture of the urethra:—

*Case of Spontaneous Rupture of the Bladder.—Extravasation of urine into the cellular tissue between the bladder and walls of abdomen—Operation—Recovery.**

William M——, aged thirty-two, of spare habit of body, but of great endurance, had for several years labored under stricture of the urethra, with frequent desire to urinate, from irritability of the bladder. He stated that on several occasions he had been unable to pass any water for several hours. On the 9th of June, 1854, Dr. Williams was called to see him, and learned that the patient had not passed any urine for two days; that on the morning of the 9th, when making a violent effort to relieve his bladder, he "felt a snap," as if something had given way in his belly; from which time he had no desire to urinate, but was troubled with "very great pain over the belly." The doctor tried to pass a catheter, but failed.—Bath; warm poultice; anodyne. Diagnosis, rupture of the bladder.

Dr. Willard Parker was summoned in consultation, and it was agreed to make an incision above the pubes, cut into the bladder and pass a catheter, if possible, from within outward, through the penis, and re-establish a passage in that way. It was decided not to cut through the perinæum, "as the extravasation was above the pelvic fascia."

The urine flowed out abundantly from the wound. There was but little hemorrhage. The bladder was deep, and firmly contracted behind the pubes, and so altered in appearance that it could not be recognized as that organ. The doctor pushed up the peritonæum with one finger, and, with a bistoury, punctured the bladder, which Dr. Parker had drawn up with a hook; on dilating this opening with the finger, the internal surface was found corrugated and thickened. The urethro-vesical orifice could not be felt, so that the original design of forcing a passage from within outward could not be carried out. Whilst the finger was retained in the bladder, Doctor Parker passed a grooved sound into the urethra down to the strictured part, and forced it onward until the point was felt by the finger through the thickened coats of the bladder. A cut was then made through the bladder, upon the end of the sound, with a probe-pointed bistoury passed along the finger. The lips of the wound made in the abdomen were brought together by a single suture; a catheter introduced, through the false passage made, into the bladder, an anodyne given, and the patient sent to bed. Urine flowed freely through the wound and through the catheter. With the exception of some local peritonitis, which was readily controlled, the case progressed to a favorable termination without any other serious complication. On the twenty-seventh day the wound had entirely closed, and the urine was passed through the urethra in a fuller stream than it had done for years.

I do not urge here, as additional evidence, Mr. Kiel's case,† of recovery from this accident, because the rent did not extend entirely through the bladder. The termination of the case will depend much upon the seat of rupture. When it involves the peritonæum, a rapidly fatal issue may usually be expected, but when the rent is in the inferior and anterior part of the body or near the neck of the bladder, the patients generally survive some weeks, and, under proper treatment, sometimes get well.

The *early symptoms* of rupture of the bladder are similar to those of rupture of the urethra, *i.e.*, a sensation of something giving way within, and a sudden relief from the extreme distention, are experienced, though no urine is voided in the natural way; but there is no swelling of the scrotum, and the sinking of the vital powers is more pronounced, and death may take place in consequence within a few hours; although, as Dr. Smith says, the symptoms may be slight or even absent. Succeeding the collapse there is "intense pain in the hypogastric region, a great desire, but incapacity to expel urine, rapid and feeble pulse, hot skin, thirst." Later there may be symptoms of peritonitis, of pelvic cellulitis, or of both. It is not possible, at first, to ascertain whether the distended bladder has poured its contents into the peritoneal cavity, or among the meshes of the pelvic connective tissue.

The degree of collapse may be an indication, but this should not be too much relied upon. If the rent be large, as in John S——, the urine suddenly and in great abundance, gushes into the peritoneal cavity and produces fatal collapse; if there be but a small aperture, only a part of the retained urine is forced out, and that gradually too, as is sometimes the case in rupture at the anterior part or near the neck of the bladder.

Treatment.—The therapeutic indications in vesical rupture are: first, to prevent accumulation of urine in the bladder, and consequently further escape of the fluid into the surrounding areolar tissue, or into the peritoneal cavity; secondly, to remove the urine from the peritoneal cavity, or to provide for its escape from the meshes of the pelvic connective tissue; thirdly, to support the vital powers; fourthly, to relieve pain—by free doses of opium—and to control inflammation. In case of rupture into the peritoneal cavity, Dr. Blundell recommended "the making of an opening above the symphysis pubis so as to withdraw the urine, and the thorough ablution of the cavity and its contents by means of the free injection of distilled water at ninety-eight degrees F." Then "to close the laceration with a ligature, and drawing up the bladder to the abdominal opening, etc." This operation has never been performed, and is as unpromising and unsurgical as paracentesis abdominis under the same circumstances.

Dr. Harrison proposed the operation of paracentesis through the recto-vesical cul-de-sac, where the urine is apt to gravitate, but it does not appear that the method has ever been carried out.

In a case of vesical rupture from injury, with extravasation into the pelvic connective tissue, Dr. Walker of Boston has been successful in using the lateral operation, as for stone,* which he performed with the double object of favoring the escape of the extravasated urine and of keeping the bladder empty.†

Dr. Thorp mentions a case of rupture of the bladder by a fall from a horse, where he succeeded in passing a catheter through the laceration—after the instrument had traversed the whole length of the urethral canal—and drawing off the effused fluid and injecting warm

* New York *Medical Times*, January, 1855, p. 11, *et seq.* This case is quoted by Professor Paul F. Eve in his collection of remarkable cases in surgery, page 407; and also by Professor Willard Parker in a paper which he read before the New York State Medical Society in 1867, on "Cystitis and Rupture of the Bladder treated by Cystotomy."

† Case 29 in Dr. Smith's table.

* The New York *Medical Journal* for August, 1872, contains an interesting article, by Professor Erskine Mason, on rupture of the bladder from violence, with an illustrative case successfully treated according to Dr. Walker's plan. The operation was performed by Dr. Mason about forty hours after the injury, and the patient discharged from hospital perfectly well on the thirty-ninth day.

† Observations on Rupture of the Urinary Bladder, by Henry Thorp, M.D. *Dublin Quarterly*, 1868, page 306.

water through the catheter to wash the peritoneal cavity. His patient recovered.

The best manner, in my opinion, of dealing with a case of ruptured bladder from stricture is to divide the stricture, and, at the same time, to combine the methods of Dr. Walker and Dr. Thorp; that is, to make an external perineal division of the stricture, entering the urethra laterally, and carrying the incision to the neck of the bladder as in lithotomy, and then introducing a catheter through the wound to explore the whole cavity of the viscus until the rent is found, when the point of the catheter is to be insinuated through it. If urine escapes freely and in abundance, the inference is that it comes from the peritoneal cavity; otherwise it may be concluded that the extravasation has taken place in the pelvic areolar tissue. In either case the operation is not only justifiable, but, I think, offers better chances than any other plan proposed. Its advantages are, that it disposes of the stricture, provides for the thorough drainage of the bladder, forms an outlet for the extravasated fluid from the connective tissue and for the escape of matter, and is the best means of arriving at a correct diagnosis. It is certainly easier to find the rent with a catheter passed through a wound in the perinæum than with the same instrument introduced through the whole length of the urethra.

In cases such as Chas. D——, a supra-pubic incision below the peritoneal reflection will be needed as an additional outlet for pus and urine.

There is nothing to be gained from puncture of the bladder; and if the stricture should be dilated or divulsed as in Chas. D——, the retention of a catheter for the purpose of drainage does not seem to fulfil the indication, and there can be no better instance, to prove its injurious effect upon the urethra, bladder, and kidneys than the case of Charles D——.

THE IMPROVED GALVANO-PUNCTURE NEEDLES.

THEIR CONSTRUCTION, USE, AND MODE OF APPLICATION, ETC.

By ALEX. MURRAY, M.D.,

NEW YORK.

The galvano-puncture needle I have nominally divided into three parts—namely, the point, the free metallic surface or conductor, and the insulated portion.

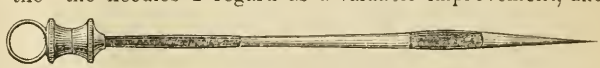
The point of the needle should be made sufficiently sharp to cut its way gradually through whatever tissues desired without lacerating them. The lance or spear-shaped point should increase in width and thickness gradually, from the extreme point to the shoulder. The latter should always be wider transversely than the stem. The bayonet point should have its three cutting edges sharp and tapering, and, where it joins the stem proper, the same diameter. The round point is not suitable for large needles—for small ones it answers very well. This form of point always forces an entrance by displacement, or by circular compression rather than by an ample clean incision. The free metallic portion of the needle should be either cylindrical or flat in shape, and sufficiently large to convey electricity wherever desired. The insulated portion of the instrument should be well covered with a good insulating material, so that the electric current cannot escape except where directed.

In manufacturing needles for electrolytic purposes, the part specially intended to be insulated should be smaller cylindrically than the adjoining portion of the stem, so that when the insulation is properly applied the instrument will present a smooth level surface with the corresponding part of the needle. The stem proper of the needle, when complete and ready for use, should have a uniform diameter throughout its whole length. The best material to use for insulating needles is hard rubber applied *secundum artem*. No other simple substance, or any combination of materials yet discovered, can supply the place of rubber for durability or perfection of insulation.

The galvano-puncture needles present a different arrangement of the insulation from any that are now in use. The point of the needle is free from insulation from one-quarter to one inch. The succeeding one-half or three-quarters of an inch is insulated. The next portion of the needle is the most important, and the part which I have selected to be used as a subcutaneous conductor, by leaving the metallic surface exposed from one-quarter to one or two inches, or even more according to the length of the instrument, and the remaining part insulated to the eye.

The insulated portions of the needle are the parts which are intended to remain in contact with the skin during the operation, so as to prevent ulceration or sloughing.

The peculiar method of arranging the insulation of the needles I regard as a valuable improvement, and



one suited for almost all cases where their use may be required. Every day's experience convinces me more and more of their utility, and that they are in every way better adapted for the resolution of *morbid growths, hydrocele, bursæ, nævi, hemorrhoids, varicose veins, etc., etc.*

They can be introduced into a tumor or vein as easily as the ordinary needle in use, and have this *special advantage of retaining whatever position they may be placed in without slipping out, or loosening their hold under the action of the galvanic current with a negative attachment, while they present more metallic surface to be acted upon by the current, and cause less pain to the patient.* They can be used in the same manner as the needles now in use, by simply coating the middle metallic portion with white wax, collodion, or adhesive plaster.

In using needles to discuss tumors or nævi, etc., by electrolysis, there are several practical points to be observed in order to obtain satisfactory results. The needles should be made of gold, platina, well-tempered steel annealed, plain, gilt, or platinized. An alloy of platinum, and iridium or steel, with a small portion of platinum, about 3 parts to the 100. This alloy of steel is frequently used in fine cutlery, and has this advantage, that it removes to a certain extent from steel its brittleness and tendency to oxidation.

The needles should be smooth and well polished, thoroughly insulated, and with a round, spear, or bayonet point. It is essential that a limited portion of the metal should be free from any insulation, so as to allow sufficient surface to deliver the action of the current where directed. The needles should be introduced from the circumference laterally, or in any direction desired, into the middle or base of the morbid growth, from one side to the opposite.

In this way they will transfix it so completely as to leave a portion of the insulation in direct contact with the sound skin, at the entrance and emergence of the needle. It is always best to insert the needles singly.

and in parallelism; a slight obliquity, however, will not make much difference.

The distance of one needle from the other may vary from one half to one inch more or less according to the size of the morbid growth, and their action then would be sufficiently electrolytic without being too localized. Should one pole, the negative, only be used, a number of needles from one-quarter to one-third of an inch apart is probably the very best arrangement for immediate localized action.

The needles are straight and curved, and from two to six inches in length.

DIRECTIONS FOR USING THE NEEDLES.

The first thing necessary in using the needles:

First select the needle or needles suitable to the size of the morbid growth on which we are about to operate, and then *place the non-insulated middle portion of the needle* or needles on the diseased part where the insertion is to be made. This portion should extend over three-quarters of the diameter of the tumor, etc., or should at least allow sufficient of the insulated parts of the instrument when inserted to be in contact with the skin.

Position of the operator and patient during the inserting or manipulation of the needles.

The physician, before he begins the operation of inserting the needles, should choose that position both for himself and the patient in which he can work to the best advantage. He should either stand or sit opposite to the part of the disease on which he is going to operate; or on one side, should he deem such a position the most suitable. Should the case in hand require that his position should be in front, or the left side, my rule is, to insert the most distant needle the first, and proceed from above downwards, or from below upwards, *seriatim*, until all the needles are in their proper position.

Mode of insertion and caution to be taken.

The operator should commence the operation by compressing the tumor between the thumb and fingers of the left hand, should the excrescence be large; but if it should be a small one, or with a sessile base, he should either stretch or pinch up the skin with the forefingers and thumb, so as to render it tense and steady, and then with the right hand insert the needle into the skin, keeping the point close to the thumb. After this is done, he should pass it fearlessly and deliberately through the middle or base out to the opposite side, so as completely to transfix it, letting the point emerge near the forefinger. After each needle is placed in its proper position, he ought to cover the exposed point immediately with a small piece of cork-wood to prevent injury to the patient or medical attendant, in case either of them should accidentally touch it.

The best mode of operation in cases of large morbid growth.

As a general rule, the best treatment of large morbid growths is, to use both poles of the battery in the body of the diseased part, and allow the distance between the needles to vary from a half to one inch. By this means we can get the full influence of the current directed where it is desired, and so effect a speedy resolution of the disease by electrolysis. Should the negative pole only be used in the body of the tumor, the positive should be applied with a suitable well moistened sponge or chamois-covered electrode on the surface directly over the needle or needles, or "*vice versa*."

General application of the galvanic current; the best way of proceeding in electrolysis.

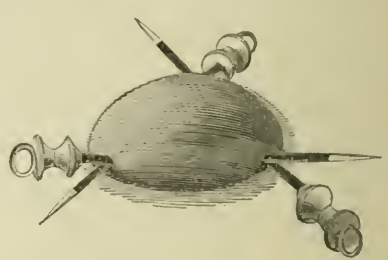
For the electrolytic treatment of tumors, etc., the application of the galvanic current either with or without general or local etherization, should always at first be mild and gradually increased to the required strength, and should never be employed until all the appliances of the needles are properly arranged, and secured directly to the battery, or by some portable arrangement for holding the needles. My "*serres fines*" will be found a convenient instrument for holding one or more needles that may be required, connected by an interrupting handle to conduct or break the current when desired. If the battery has been recently filled, from 16 to 20 cells will be amply sufficient to employ; but if in use some time, 24 to 30 cells.

The conductors should be made of strands of very fine copper wire, about 15 or 16 pieces of No. 35 twisted into cords, and covered either with silk or cotton of two colors—red for the positive, and green for the negative pole.

Length of séance.

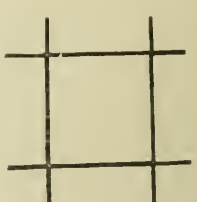
The duration of the séance for adults may range from 10 to 40 minutes, according to the nature and size of the diseased growth. For children, from 3 to 10 minutes will suffice, except the operation is performed on the head or neck, when 2 to 5 minutes will be amply sufficient.

The best method of operating on *nævi* by electrolysis is to insert the needles in the form of a triangle, as represented in the annexed wood-cut.



The engraving shows at a glance the way in which the needles should be arranged. This method possesses a decided superiority over the usual mode adopted in the arrangement of the needles around and through the base of the circumference of the vascular mass.

The same principle is here shown of insulating or strangulating the excrescence by cutting off nutrition with the needles, as would be done by the ligature subcutaneously. If the nævus is a large one, four needles may be inserted in a quadrangular form—thus:



or they may form as many sides as the number of needles employed. When operating with needles on nævi, they should be inserted *through the base of the tumor only*, allowing the entrance and exit of the needles to appear in the sound skin. A sufficient number should be employed at the same time. And never, if I may so speak, should the growth be tickled with small inefficient needles.

The object we have in view, when operating with needles, is to destroy, or at least arrest the circulation of the blood in the vessels which supply nutrition to the excrescence. The latter undergoes, after the elec-

trolytic action of the needles, the process of consolidation from disintegration or coagulation of the blood; wasting, and drying up of the different tissues composing the vascular growth occur, leaving the *débris*, generally in the form of a dry crust, to fall off in one or more weeks.

The electrolytic treatment of nævi possesses its chief advantage in being safe, practical, and easily performed. Better results will generally be found to follow this mode of operating than the methods usually employed. Besides, there is no danger from hemorrhage, inflammation, suppuration, or pyæmia, nor sloughing when due care is observed.

As a rule, I would forbid the use of steel or gilded steel needles attached to the positive pole of the battery, on nævi situated on any part of the face. The nascent protoxide of iron eliminated by the electrolytic action of the positive pole on steel needles will occasionally leave a permanent blue stain in the dermoid tissues after the disappearance of the nævi. I noticed that this discoloration occurred in two cases after my first operations with steel needles. The oxides of the iron *per se* may act mechanically in arresting the flow of blood (?), but they do not possess any hæmostatic properties whatever, unless combined with a mineral acid to form a *proto* or *per* salt of the mineral.

I also make it a rule not to meddle with nævi situated on the anterior fontanel in infants under two years of age, except the local application of the tincture of iodine occasionally, in order to prevent the further growth of the excrescence.

We find that as soon as the osseous structures begin to close the opening, and frequently long before the closure of the fontanel occurs, the nævus disappears spontaneously. The reason is obvious: as the frontal and parietal bones progress in their growth towards closing the diamond-shaped opening of the head, the blood-vessels which supply the excrescence are gradually compressed by the slow progressive growth of the bones, and ultimately obliterated. The vitality of the growth of the vascular mass is thus impoverished from want of blood, and the mass itself gradually wastes away, until it finally disappears without leaving any trace to indicate where it had existed.

I have noticed the spontaneous disappearance of nævi occur in four cases—in one of them it took place in less than three weeks.

HYDROCELE.

Before we operate for hydrocele with needles, one or two things must be observed, if the accumulation of liquid is large. I would recommend that a portion, at least one-half, of the contents of the sac be withdrawn before the needles are employed. We shall find that, by adopting this mode of proceeding, we lessen the quantity of the fluid to be acted upon by electrolysis, and allow room for distention and the collection of the nascent gas as it arises from the catalytic action of the needles in the liquid, and that the process of absorption will be more rapid. This latter process should always be allowed to take place spontaneously after electrolyzation. It may be aided, if deemed necessary, by the daily applications of the continuous current to the scrotum externally, in a labile manner, by means of well-moistened sponge-covered electrodes. The latter should never be allowed to remain more than a minute on any one part. We may use three or four needles in the interior of the sac, and attach every second needle to the positive pole and the remaining needles to the negative. This arrangement works better than to have two negatives and two positives together, a proceeding which renders the action of the latter too localized.

Should we employ three needles only, with both poles in the sac, the outside needles should be connected with the negative pole, while a large needle of platinum in the middle with the positive.

Having operated with my needles in eleven cases of hydrocele by electrolysis, I can recommend with confidence the methods above suggested.

Physicians occasionally meet with disappointment when using needles in the treatment of hydrocele by means of the galvanic current. There are times and conditions of individual cases when all modes of treatment will occasionally fail. The most apparent cause of failure in electrolysis arises from the fact, that we employ needles which are too small and liable to fall out of the sac during their use when connected with the negative pole. The free metallic surface of the needles that should be employed in the interior of the sac, should at least be from 1½ to 2 inches in length. There should never be less than two or three needles employed at any one operation. I allude particularly to my own needles; as they present a larger surface, fewer needles will be required than are now usually employed. Although my needles make two punctures—entrance and exit—yet, when properly inserted, this is a practical advantage rather than a disadvantage in most if not in all cases requiring their use for electrolysis. A needle too many, or too large, at any time, is preferable to small inefficient needles, or an insufficient number, in electrolysis.

Their advantage in hydrocele is apparent, where there is a large quantity of liquid in the sac to undergo an electrolytic chemical change. By employing a sufficient number of needles in the interior of the sac, we change the causation of the morbid action, and restore the balance between secretion and absorption.

The electrolytic treatment of hydrocele with the use of the needles, is attended without any danger or inconvenience, and recommends itself from its great simplicity, and apparent freedom from pain, and the success attending it is likely to supersede the trocar and canular with or without injections, setons, incisions into the sac, acupuncture, etc., as hitherto practised, and not always successful.

The needles should be inserted through the upper part of the scrotum and carried down close along its anterior and inner surface to the opposite point or bottom of the sac, and again thrust through the scrotum wherever desired. By passing the needles downwards (vertically), rather than from below upwards, laterally, or obliquely, we can avoid doing any injury to the testicle. This mode of proceeding will be found not only the most convenient, but the safest and best to adopt in almost all cases of hydrocele.

The mode of operating in hydrocele.

Local anæsthesia is seldom required before commencing the operation with needles for hydrocele.

The patient should stand against a door or wall, with his legs far enough apart so as not to interfere with the hands of the operator. The physician should sit opposite, a little to his right, and grasp the scrotum behind with his left hand, so as to render it tense, steady, and prominent anteriorly. He should also ascertain that the testicle is not in the way, so that it can be injured by the needles. The latter should be of a size suitable to the hydrocele on which he is about to operate. The needle should be held perpendicular to the scrotum, between the thumb and forefinger of the right hand. The operator should then engage the attention of the patient, and ask him when he touches the scrotum (the part selected for the insertion of the needle) with the point of the needle if it gives him any pain, and before a reply can be made, let him push the instrument

through the scrotum downwards into the sac, and out through the lower part of the scrotum, so as to completely transfix it, with a quick, semi-rotary motion. After the first needle is in position, he will find that the patient will not object to the introduction of the remaining needles, as the pain is comparatively trivial.

When all the needles are in an arranged position, and attached to the *serres fines*, with an interrupting handle connected to the negative pole of the battery, the galvanic current may then be allowed to flow for 15 or 20 minutes. At first it should be mild, but afterwards gradually increased to such strength as the patient can comfortably bear. The positive pole should be applied by means of a sponge-covered disk to the scrotum directly over the needles.

The scrotum should be shaken or kneaded frequently during the séance, so as to insure the full influence and general distribution of the galvanic current through every portion of the fluid contained in the scrotal sac, and thus avoid immediate localized electrolyzation. A slight œdema and inflammation of the scrotum occasionally follow the use of the needles. The application of a cold lotion containing hydrochlorate or acetate of ammonia to the part affected for a day or two is all the local treatment required. At the same time it is essential, after the needles are withdrawn, that the patient should wear a suspensory bandage for some time afterwards to sustain the weight of the scrotum, and in the event of any hardness or enlargement remaining after the absorption of the fluid.

Our success in operating by electrolysis depends chiefly on having a good galvanic battery, and good insulated needles. The elements of the battery should be of a medium size, neither too large nor too small, so as to allow at least 9 or 10 square inches of surface of each element to be exposed to the action of the generating battery fluid, especially when an *acid* solution is employed. A larger amount of surface is required when we use a mineral salt dissolved in water as an exciting liquid.

What is most desirable in the battery we employ, especially for electrolysis, is an instrument possessing a large quantity of electricity, with considerable intensity to overcome resistance, and to render the electrolytic process possible. All modifications of Daniels' battery are the most reliable and constant yet devised, but their great weight and bulk or want of portability, confines their use to hospital or office practice. The modifications of Bunsen's are more portable, as Stöhrer's, and which is still further improved by the Galvano-Faradic Co., J. Kidder, and Curt Myer. The portable batteries manufactured by the above firms are reliable, and possess all the qualities necessary for electrolysis.

In order to have a regular and reliable current, the battery should be charged with fresh, well-mixed battery fluid the day we perform any important operation. There should be the same quantity, accurately measured, of liquid in each cell, and the elements should be immersed in the cells to the same depth. I allude to the portable batteries. The interior of the binding screws, the ends of the conducting wires, and the various metallic connections, should be perfectly free from metallic oxides or dirt, and all the necessary connections should be properly secured to the battery. The latter, also, should be set in operation a few minutes before we require its use, as by this procedure we can avoid the fluctuating current generated when the elements are first immersed in the battery fluid.

A strict attention to these minor details will prevent disappointment and insure the proper action of the battery, and success will attend our operations. Hammond's permanent hospital battery is the most reliable and constant battery in the United States. Brenner's Galvano-Faradic machine, as modified and improved by the Galvano-Faradic Company, is an admirable instrument. The physician who is the happy possessor of a Brenner has a treasure, and requires no other apparatus for electro-therapeutics during a lifetime. The size and weight of the cells, and the permanent fixtures, confine their use to hospital or office practice.

Curt Myers' new portable galvanic battery, a modification of Lechanché's, is a very neat, ingenious, and well-made instrument. The small size of the elements that are used in the construction of this apparatus are not sufficient to give a large quantity of electricity with intensity suitable for electrolysis. Not having tested the merits of this instrument, I cannot speak decidedly as to its practical utility in electro-therapeutics. The galvano-cautery battery is a special instrument, and employed principally for the purposes its name implies.

Dresher's galvanic battery, with the U-shaped cells, has not in my hands answered my expectations, although I regard it as a neat and portable apparatus. The elements are too small for the battery fluid employed, and the value of the battery is sacrificed for portability. The instrument will be found suitable for operations on such delicate organs as the eye, ear, or urethra; but for the electrolytic treatment of diseases with the use of the needles, it will be found to lack sufficient *quantity* of *electricity*. In order to obtain the same result conditionally with this instrument as with any of the thirty or thirty-two cell batteries manufactured by the names already mentioned, between seventy and eighty cells would have to be employed, to be equivalent in quantity or to obtain any satisfactory electrolytic results, and then, practically speaking, the *intensity* would be considerably in excess for electrolysis. In a word, this instrument gives a *minimum* portion only, instead of a moderate or proportionate share of quantity of electricity for the number and size of the elements employed.

The following case of nævus shows the result of the action of two different batteries.

Dr. G. Thompson wished me to operate on a child eleven months old, who had a subcutaneous erectile tumor, about the size of a walnut, situated on the left side of the vulva. The nævus, a few days previous to my visit to the patient, had been ruptured. This having occurred some time during the night, a considerable quantity of blood was lost before the accident was discovered. I used general anæsthesia, and inserted three of my needles, in the form represented in the wood-cut. I attached each needle to the negative pole of the battery, closing the circuit directly over the tumor with a small platina disk, and then employed a current of twelve cells of Dresher's battery, charged with fresh battery fluid that day, and increased gradually to twenty, the full amount of the battery. The séance lasted twenty minutes, without any marked result. Seven days after the operation, the blood-vessel which had been previously ruptureda gain gave way, and hemorrhage occurred to a considerable extent before it could be arrested. I felt somewhat disappointed at the result of this operation with the needles. But I found that the fault was in using a battery current *deficient in quantity*, and not in the needles.

As the child was weak from loss of blood, I went prepared to strangulate the nævus with the ligature subcutaneously. Dr. T—— was anxious that I should test the needles by the use of another battery. After local anæsthesia, I inserted three needles in the same manner as in the former operation, and employed a current of ten cells of the zinc-carbon battery manufactured by the Galvano-Faradic Co. The current was

employed for ten minutes. In a few moments a marked change was visible. The purplish red color of the nævus soon changed to a pale leaden hue, as if the part had been suddenly frozen, and also presented a hard shrivelled appearance. In less than three weeks a brown dry crust fell off, leaving a small cicatrix to show where it had existed.

I have operated in a considerable number (17) of cases of nævi with my needles, and have obtained satisfactory results. In five of the cases, especially in large mixed nævi, I have had to make two, and in one of the cases three applications of the needles before I could arrest the vitality of the excrescence. I must say that this occurred before my present improved method of arranging the needles. With the present arrangement a second application will not often be required.

I look upon the galvano-puncture needle, when employed in a tumor, and attached to the negative pole of a galvanic battery in operation, as similar in its effects to a mitrailleuse or a Gatling gun on a small scale, but comparatively more powerful and destructive, especially when discharging its *miniature bomb-shells of nascent hydrogen* into the camp of the enemy, causing disintegration of the different tissues directly engaged, both by their mechanical and chemical action, separately or combined.

239 East Tenth Street.

BAPTISIA TINCTORIA IN TYPHOID FEVER.

By EDWARD DUFFIELD, M.D.,

HANNIBAL, MO.

For many years a disposition has been manifested, an over-eagerness, if the expression may be allowed, on the part of enthusiasts in the medical profession, to multiply the forces of the materia medica, by additions of remedies entirely new, or by chemical recombinations of others which have been long in use, resulting sometimes in merely varying, and slightly, things inferior to what we have long possessed. Out of this spirit, laudable if under proper restrictions, has grown a habit of hobby-riding of certain articles to a reprehensible degree, or of promising more for their favorite remedies than judicious trials, carefully watched in numerous cases, have been able to realize, and thus disgusting thoughtful minds, and even leading them to view with suspicion, if not positive distrust, the suggestion of remedies which possess real merit in certain forms of disease. Having this in mind, we feel some hesitancy in inviting the profession to investigate the claims which Baptisia Tinctoria, or Wild Indigo, has established in our own, and the minds of others, as an agent of decided value in Typhoid Fever. It is not presented as a new and original remedy, for the simple reason that it has been used for a few years past occasionally by the Eclectics, in this and other diseases, with reasonable success; and we desire that its merits should be more fully known than heretofore by the regulars, and this can be only done completely by fair trial. An account of the Baptisia may be found in "King's American Dispensatory," in "Grover Coe's Concentrated Remedies," and in "Tilden's Supplement to the Materia Medica." Whilst we possessed some slight knowledge of it for years, yet we had not used it until our attention was aroused to its real value, by reading last spring a pamphlet by William Bayes, M.D., and issued by Baillière & Co., of London, which assigned it high rank as a curative in Typhoid Fever; and this was corroborated by the "Lancet." In the first two cases in which we gave it, we were induced to it by the failure of the acids, nitric and sulphurous, with quinine and extract of belladonna, and the turpentine emulsion, to relieve, or even make any decided impression on the disease. The patients—one a very stout, robust young man ordinarily, and the other a frail and almost effeminate man—presented from the inception of the disease a very unfavorable train of symptoms, in their rapid and wiry pulse, with dry, harsh skin, and temperature varying from 104° to 106°, with tongues dry and fissured—tips sharpened, and very red and glazed on the edges, whilst the centres were a dark brown. Abundant sordes on the teeth and lips, breathing very offensive, and body odor the same; features pinched and almost sardonic; much disturbance of the ganglionic system; constant, low muttering delirium; not possessing, after the first few hours from seizure, the slightest gleam of intelligence; with utter unconsciousness of the evacuation of the bowels or bladders; diarrhœa severe, and discharges very offensive; much tympanites, picking at flocks in the air, and continuous subsultus tendinum, and the patient at times almost maniacal with excitement and difficult to keep in bed. Here summed up symptoms of a very grave, and indeed desperate character, and physician and friends were alike in despair. Patient had been sponged with alcohol and cold water and alkalies; had supporting treatment in diet; plenty of fresh air, quiet and good nursing. And the acids, etc., had, as indicated, failed to impress the disease in the slightest, as far as we could discern. Something yet must be done, and what?

At this trying conjuncture, when death seemed as though it would certainly claim them, and the desire to save was sorely pressing, the pamphlet of Dr. Bayes on the Baptisia Tintoria, and its endorsement by the "Lancet," occurred to our mind, and we summoned up our "forlorn hope" in this, for our last assault upon the enemy.

We gave the concentrated tincture, in three-drop doses, every two hours, continuing the acid and belladonna; and with what torturing anxiety we waited and watched (with one or two other physicians invited to witness the trial) for hours to discover any effect it might have, can be divined only by those under like circumstances. Finding it borne well, after six or eight doses had been tried, it was increased to five drops with same intervals of administration; and at the expiration of twenty-four hours we could discern a reduction of a degree or more in the temperature, with softer pulse and skin, and so far felt encouraged to persevere. And at the expiration of forty-eight hours there was less delirium, and less subsultus and pricking in the air, etc. In seventy-two hours from the commencement of it, there was some gleam of intelligence, tongue softening, and sordes diminishing; and at the expiration of another twenty-four hours there was a return of consciousness sufficient to recognize the calls of nature by the patients, and the direction of the nurse's attention to them. Diarrhœa very much diminished, and their beef-tea, etc., taken readily. The treatment was continued until, at the end of a week, convalescence had established itself, greatly to our gratification and the unspeakable happiness of their friends.

The effect of the Baptisia was so manifest in these two cases as to induce us to try it in some eight other cases of Typhoid Fever, the last one of which is now just convalescing; he having been sick for some three or four weeks, and under the care of another physician preceding our call, and judiciously treated with acids without any apparent relief; but, as in preceding cases, the introduction of the concentrated Tincture seemed to produce an almost immediate impression. It might be urged that a favorable change might have

occurred by perseverance with acids, etc. It is possible; but the evidence in favor of it is not sufficient to convince our minds; the weight lies against it.

Whilst we do not desire to be over-sanguine, and are frank to admit that its trial in ten or eleven cases is not sufficient to establish its full value, yet it is sufficient to assure us of its power thus far, and to ask that the medical profession would give it a full and fair trial for themselves, which alone can prove what place it deserves in our medical armamentarium. We do not by any means wish to be considered as urging it, to the displacement of the acids, quinine and extract belladonna and turpentine, our heretofore sheet-anchors in Typhoid Fever, but only as an additional remedy for its control and relief. Whilst here, we desire to express our general preference for *Sulphurous*, over any other acids in this fever, for reasons which we have neither time nor space to elaborate. It has been our practice to administer the solid or fluid extract of belladonna in quantities sufficient to produce its effect in dilating the pupil; endeavoring to maintain this, and increasing or diminishing it, as may be required. The acids have been given in my cases, and the tincture of the Baptisia in the intervals, if possible.

The books teach us that the Baptisia Tinctoria, an indigenous plant, is a decided antiseptic and alterative, with special power of control over the nervous system. Also a valuable emmenagogue, etc. Now if the Eclectics possess in it a valuable remedy, as they claim, and we believe, for Typhoid Fever, we do not know of any reason why its use should be confined to them or the Homœopaths who have used it; and we shall rejoice if the proving by our professional brethren shall have discovered to them, as it has to our own mind, an additional remedy for the cure of Typhoid Fever.

Progress of Medical Science.

Treatment of Scarlet Fever.—The late Prof. Geo. T. Elliot, in a lecture on this disease, gave the following method of treatment: To bring the eruption out, if it has not already presented itself, order hot baths and blankets. Give nothing to eat at first in the eruptive stage, and only allow the simplest nourishment the first day. Patients experience great relief from baths, and the application of cold cream, or mutton tallow, over the whole body. Visit the patient twice a day. By pouring a pitcherful of cold water over the back of the neck, especially when the glands are enlarged, great comfort is experienced. As a gargle, make use of chlorate of potash or soda. Pieces of ice are good, in the mouth. Sprays, thrown in with Richardson's instrument, of lime water, solutions of alum and sulphate of zinc, are beneficial. As a palliative to the throat, the vapor from slaked lime can be recommended. Strong beef tea, with opium, may be thrown up the bowel. Begin to feed the patient from the second day of the eruption with animal essences. If the tonsils are enlarging and the pharynx exhibits much redness, with diphtheritic exudation, the physician has a right to say that things look bad. If the throat symptoms do not mitigate on the fourth or fifth day, the voice being affected, then one feels that there is a good deal of danger. When the kidneys show hyperæmia, desquamation, or transitory albuminuria, then there is a twofold danger. Always examine the urine. When the patient has kidney disease, the treatment should be directed to the skin and bowels; when the latter are loaded and constipated, give powerful saline cathartics. Get Ronochetti's apparatus, to produce perspiration. To convalescing patients the use of iron is beneficial. The bisulphites have been recommended, but, from experience, they cannot be advocated. Belladonna is not always a prophylactic, although, on account of its innocence, and a feeling of satisfaction to the practitioner and family, it is well to administer it.

Chloral Hydrate in Puerperal Convulsions.—Edward Montgomery, M.D. of St. Louis, Mo. (*St. Louis Medical and Surgical Journal*, Sept. 1872), after employing vene-section, and administering brisk purgatives, in cases of epileptiform or apoplectic puerperal convulsions, then greatly prefers the chloral hydrate to the chloroform, or the ether and chloroform treatment. He thinks the chloral is much safer, administered in 15 or 20 grain doses, and it can be given safely and efficiently by any sensible and experienced nurse. In administering this remedy he gives it in a dilute solution, and never repeats the doses at too short intevals. He generally orders, every two or three hours, two drachms in four ounces of spearmint or cinnamon water; a tablespoonful of this solution in a tablespoonful of syrup for a dose.

Cerebro-Spinal Meningitis.—Robert F. Smith, M. D. (Kansas City *Med. Journal*, August, 1872), having been familiar with the management of this disease in the various hospitals of New York City, gives some sensible remarks on the causes, pathology, and treatment of it. In regard to the unexplainable general hyperæthesia attending it, he remarks that if the vascular membrane dipped into the posterior fissure, in the vicinity of which the sensory roots are supposed to originate, it could easily be accounted for; but may it not be explained by the fact that some of the sensory roots do arise from, or at least have been traced into, the anterior columns, as mentioned by Gray and taught by Prof. Austin Flint, Jr.? The sixth nerve must be considerably irritated early in the disease, but the muscle it supplies has not sufficient force to overcome those supplied by the third nerve, though, becoming paralyzed later on, the adducentes act without antagonism, and the convergent variety of squint follows. In concluding, the subjoined treatment, by Prof. Loomis, is submitted: Sol. saturat. potassii bromidi, minims xl., every two or three hours; quinine sulph., grs. iii. to v., every three hours; ice to the head and spine; blisters to the nape of the neck; bleeding when the constitution of the patient will admit of it, and tonics during convalescence.

Mephitis Occidentalis.—At the August meeting of the Alameda County Medical Association, held at Oakland, Cal. (*Western Lancet*), Dr. Gibbons presented a dissection of the excretory glands of the *Mephitis Occidentalis*, or California Skunk. The dissection proved that the animal cannot emit its odor unless its tail lies flat on the back, as that movement produces tension of the muscles which press on the excretory glands. These glands are contained in two sacs situated one on either side, containing collectively about a half ounce of oil. The Doctor experimented on this oil to remove its odor, and found that while readily dissolving in ether, it did not suffice; it was necessary to first saponify it with caustic potash, then a solution of carbolic acid readily deodorized it.

Treatment of Fracture of the Inferior Maxillary Bone.—Dr. R. W. Murphy, of Sacramento, Cal. (Dr. Logan's Report) has devised a new, practical instrument for the treatment of fracture of the inferior maxillary bone. The practical advantages of this splint are: 1. It is not difficult to apply, and when applied it re-

mains in position. 2. It allows of the free use of the jaw and the taking of nourishment, even meats and solid food; and also the use of tobacco, both chewing and smoking. 3. In comminuted fractures perfect articulation of the teeth is easily secured, which is a point much to be desired, both by the physician and the patient.

The splint presented to the Philadelphia Museum is made of steel, and nickel-plated, to prevent it from corroding in the mouth. The underplate is hard rubber; the whole splint may be made of hard rubber, which he thinks would be cheaper and answer every purpose.

Luxation of the Humerus from Muscular Contraction.—Dr. A. H. Salisbury, of Mazamanie, Wis. (*Med. Examiner*, August 15, 1872), speaks of a man, aged 40, weighing over 200 pounds, subject to epileptic convulsions, who, after a severe attack, complained of continued pain in the shoulder; upon examination, a backward dislocation of the humerus was disclosed, the head resting on the dorsum scapulæ. Slight extension and a little manipulation caused the head to slip into its place with a snap, giving the patient instant relief.

Physiological Action of Alcohol.—W. E. Bessey, M.D. (*Canada Med. Record*, Sept., 1872), in an important paper on "Therapeutic Value of Alcohol," speaks thus of its physiological action: "Its effects are to irritate and inflame the stomach, to vitiate the secretions of the alimentary canal, and thereby produce dyspepsia, diarrhœa, and dysentery. Its action on the blood is to impoverish that fluid and to cause a retention of fatty matters therein; upon the brain, congestion at first of its meningeal coverings. Congestion of the brain substance follows, producing disordered action and finally inducing abnormal changes of structure; impairing, weakening, or destroying the harmony of the intellectual operations. It induces a semi-apoplectic condition of the lungs when taken in large quantities, and always favors a determination of blood to this organ, which eventually produces diseased structure. It congests the liver (especially when taken in the form of brandy or spirituous liquors), and by its oft-repeated action on that organ weakens its structure, impairs its function, and eventually produces a diseased condition of the organ. Upon the kidneys its action is no less detrimental; by its repeated congestions favoring granular degeneration, or Bright's disease; and greatly aggravating diabetes, if not directly causing it, by its property of exalting the function of the liver to produce sugar, and by exaggerating the glycogenesis of health, causing an excessive excretion (of sugar) by the kidneys. It may also aggravate diabetes by its action upon the nervous system, producing that altered condition which is favorable to the collection and discharge of sugar from the body.

"It being well known that injury to the sympathetic nerve rapidly induces a strongly diabetic state, as also does the inhalation of anæsthetics as chloroform and ether, so that alcohol, being an anæsthetic to the nervous system, may act in that way to aggravate diabetic symptoms."

Phenomena of Vaccination.—In a clinical lecture on this subject, by the late Prof. Geo. T. Elliot, the subjoined remarks were made: The matter must be taken in the form of lymph, or scab. The point of insertion is on the left arm, at the insertion of the deltoid muscle; vaccination should be made in more than one place—two points are enough, and they do not occasion more inflammation than one. It must not be done in childhood, ordinarily, earlier than three months old. Visit the patient on the seventh day after the virus has been applied. On the fifth day a little vesicle or elevation will begin to be discerned. On the ninth and tenth days a brownish or blackish scab commences to form, which falls off from the twentieth to the twenty-fifth day. Vaccine lymph must be taken on the seventh or eighth day, as it is then clear and good. *Syphilis*, from impure matter, can be transmitted through families. The only way to secure the lymph, so as to keep it for any length of time, is to make use of the glass capillary tubes. Then it can be kept for several weeks. The other way of taking lymph—viz., charging the convex surface of the quill—is very convenient, but it will not keep long. The whole should be kept in a cool place, and in corked, dark bottles. When the scab is used, it should be preserved in a piece of wax covered with tinfoil. Dr. Jonas P. Loines, of the Eastern Dispensary, has always excellent vaccine virus. On the fifth day, when one observes that the vaccine virus has taken, attended with some inflammation, order some lead wash, to be applied not on the sore itself, but all around it. Revaccinate every five years. If a pregnant woman has been exposed to the small-pox, vaccinate her as often as possible until it has taken. In spite of the great care in the selection of lymph, vesicles will be observed, which is a secondary complication. In concluding, Prof. Elliot said that, if he saw that the child had eruptions, he would postpone the vaccination, if he could.

Parturition not Necessarily a Painful Process.—In a paper on this subject, read before the Georgia Medical Association by Jno. Stainback Wilson, M.D., Atlanta, Ga. (*Atlanta Med. and Surg. Jour.*, Aug., 1872), he attempts to demonstrate "the position—first, physiologically; second, practically or experimentally; and finally," he "concludes with a notice of the Biblical or theological objections, founded," as he conceives, on an erroneous intepretation of the "curse" inflicted on woman. His first argument is, that the nerves of the uterus are derived almost entirely from the organic or sympathetic system, and, therefore, that there is nothing in the nervous structure of the organ to render it highly sensitive when in a normal condition. The cause of the excessive pains of labor may be summed in these words—viz., morbid irritability of the nervous system in general, and of the uterine nerves in particular, with deficiency or absence of vital expansibility, either as a cause or effect of this nervous irritability. To fulfil the great and all-important indication of removing that morbid irritability and that excessive rigidity which are the great causes of the pains of labor, everything should be brought into requisition that will equalize the circulation, promote the secretions and excretions, relieve oppression, hasten the vital, eliminative, and nutritive functions, and allay nervous irritability. The principal means are: Good, digestible, laxative diet, in moderate quantities; cooling, bland, unstimulating drinks; avoidance of stooping or doubled positions; loose, comfortable clothing; pure air by day and night; abundant sleep; equanimity of mind; sunlight; and last, though not least, general and local baths, followed by friction of the skin. He concludes with the following principle, which should govern and guide obstetricians in the management of pregnancy: Pregnancy, though a natural physiological condition, is one of increased excitement, attended with extraordinary demands on the whole organism. Six cases are recorded, in which the several labors were short and almost painless.

Extra-uterine Pregnancy.—W. A. Matthews, M.D., of Fort Valley, Ga. (*Atlanta Med. and Surg. Jour.*, Aug., 1872), reports a case of Fallopian pregnancy, the fœtus weighing about 8½ or 9 pounds, having been

discharged into the cavity of the abdomen by the laceration of the tube during the protracted pain, causing peritonitis, which terminated the patient's life. The patient was a colored woman, aged 26, the mother of two children, the youngest six years old. The empty uterus was about as large as the head of a small fœtus, and presented a rather peculiar, shapeless appearance, of a dull, whitish color.

Exercise of the Teeth Conducive to Healthy Nutrition.—E. D. Swain, M.D., Chicago, Ill. (*Miss. Dent. Jour.*, Aug., 1872), has an abstract of a paper proving that the proper exercise of the teeth is conducive to healthy nutrition. He believes that most of our food is too much prepared; and is in fact already in a condition to be sent into the stomach, requiring no force by the teeth to prepare it for that organ. He has observed that the teeth of foreigners coming among us from those countries where the food is less prepared, have, as a rule, better teeth, and are less decayed, with larger and better developed jaws.

Dislocation of the Radio-carpal Articulation.—J. W. Brock, M.D., Leavenworth, Kan. (*Med. Herald*, Sept., 1872), records a case of this rare accident, in the person of a colored boy, aged 13, who fell from a tree in such manner as to bring the left arm underneath in the fall, and the whole weight of his body being received upon the back of the hand and wrist, violently flexing the hand on the forearm. The case was seen about thirty minutes after the accident. The luxation was reduced by making steady extension and counter-extension in a straight line, when suddenly, and with a very perceptible click, the bones resumed their natural positions. He was assisted by Dr. Houston, and Mr. C. C. Goddard, his office-student.

Fracture of an Incisor Tooth.—At the late meeting of Southern Dental Assocn., Dr. W. Leigh Burton, of Richmond, Va. (*Am. Jour. Dent. Science*, Sept., 1872), presented for examination a deciduous superior left-central incisor tooth, which had been fractured at the neck by mechanical violence at the age of two years, and had subsequently united with the crown at a right angle with the root. This specimen has been presented to the Museum of the Baltimore College of Dental Surgery.

Normal Distortion of the Pelvis.—In a paper read before the Norfolk (Mass.) District Medical Society, Dr. Edw. T. Williams (*Boston Med. and Surg. Jour.*, Sept. 12, 1872), from actual measurements of 41 pelves—21 male and 20 female—endeavors to show reasons for questioning the truth of this assumption: that the two sides of the human pelvis are equal and symmetrical; or, if varying slightly from perfect symmetry, that such distortion is merely accidental. He remarks, in concluding, that the figures given are far too few to establish satisfactorily the truth of the views suggested, but thinks they go far enough to show the *probable* existence of left distortion in a majority of cases as a definite anatomical feature. As to the supposed influence of the deformity in causing the vertex to present by preference on the left side of the pelvis, it is offered simply as a theory.

The following figures give the amount of deviation towards the left in fractions of an inch:

	Symphysis pubis.	*Acetabulum.*	*Oblique Diameter.*	*Ant. Sup Sp. of Ilium.*
Average of male pelves....	1-7	1-6	1-7	1-16
Average of female pelves..	1-8	1-8	1-12	1-8
General average.....	1-7	1-7	1-9	1-11

Veratrum Viride as a Hæmostatic.—J. W. Collins, M.D., of Jackson, Tenn. (*Am. Practitioner*, Sept., 1872), after an extensive use of this drug in different forms of hemorrhage, is thoroughly satisfied that it possesses this property in a very remarkable degree. He esteems it the promptest as well as the most reliable of all the means for controlling both active and passive hemorrhage. In epistaxis, periodical hemorrhages of placenta prævia, menorhagia, in secondary hemorrhage following amputation of the cervix uteri, and in hemorrhage in two cases of uterine carcinoma, it has been uniformly successful.

Prof. J. T. Gilmore, of Mobile, Ala., has used the veratrum with entire success, after other means had failed, in a secondary hemorrhage following amputation of the thigh; also in a case of epistaxis, which was so obstinate as to threaten life. He further states that the remedy, given in doses of 15 drops, is regarded by the profession in Mobile as being the most efficient remedy in certain cases of puerperal eclampsia. He has seen the best results follow its use in the periodical hemorrhages which occurred in two cases of placenta prævia.

It should be given in doses of from 3 to 15 drops, repeated every one, two, or three hours, according to the urgency of the case, always carefully watching its effects.

Gonorrhœal Injection.—Dr. Reynolds, of Louisville, Ky. (*Am. Practitioner*, Sept., 1872), mentions that he has used the following injection with almost uniform success in a number of cases of gonorrhœa:—℞. Balsam copaiba, ʒ x.; Cryst. carb. soda, ʒ xx.; Water, ℥ xxx. M. To one part of this emulsion add three parts of water, and inject through a catheter carried into the urethra four or five inches, as often as twice or thrice a day. In chronic cases he uses equal parts of water and the emulsion.

Pustulation with Tartar-Emetic as a Substitute for Vaccination.—Dr. B. S. Woodworth, of Fort Wayne, one of the oldest and most eminent physicians in Indiana (*Am. Practitioner*, Sept. 1872), writes that his theory—which he has held for thirty-four years—is, that pustulation by tartar-emetic is as good a preventive of small-pox as perfect vaccination. He was led to this theory from a series of papers, in 1838–9, published in the Boston *Medical and Surgical Journal*, in which the almost exact resemblance of tartar-emetic pustules and vaccinia was mentioned. This fact, he adds, is familiar to every physician. Not only is the similarity of the two perfect at their full development, but the successive stages are also alike. He asks: Why may not this artificial pustulation be just as good a preventive as vaccination, since the same process has been gone through with, and the same molecular changes? And certainly there can be nothing more mysterious in the one case than in the other. Some five or six years after he had first entertained this view an article in the London *Lancet*, by a German author, advanced the same theory, and, he believes, verified by cases. Dr. Woodworth suggests that experiments be made in hospitals, to prove this theory; and closes his communication with these words: "I almost regret that I was ever vaccinated, for I would be willing to run the risk in proving that which I believe true."

Case of Beriberi.—An interesting case of beriberi, the symptoms of which at one time strongly resembled those of aortic aneurism, is detailed in the *Madras Monthly Journal of Medical Science*, by G. Williamson, M.D., Assistant-Surgeon of the 19th M. N. I. At last advices, the patient, private, aged 33 years, was on sick leave to his native village, and doing well. The formula most beneficial to him was the following; R. Potas. acet., gr. x.; Tinct. Scillæ, ♏ x.; Spir. nitric æther, ♏ xx.; Liq. ammon. acet., ʒ ij.; Camph. mixt., ʒ i. To be taken every three hours.

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OUR RELATIONS TO OUR FEMALE PATIENTS.

Of late years the female organs of generation have received from the medical profession a very large share of attention. The uterine element in practice has grown, in fact, until it overshadows every other specialty, a speculum being now a pocket instrument which is used with as much frequency as was the lancet in days gone by. With many young and aspiring practitioners, not to invent a speculum or some other instrument for vaginal examinations or operations, is equivalent to a want of ordinary common-sense. This is due, no doubt, to the fact that the specialty of gynæcology is believed to be the best in the whole category. If any one seeks for a practice that has the promise of a rich patronage, and a large pecuniary reward, the uterus above all other organs invites the ambitious.

By a tacit understanding on the part of the majority of practitioners, uterine diseases are capable of explaining every conceivable trouble to which sickly and nervous females are subject. The females themselves have been educated into that belief, and any practitioner who cannot convince them that they have abrasion of the os, endo-metritis, or some displacement, is altogether behind the requirements of the age. As one of the consequences of faith in the unseen, a vaginal examination is submitted to as the *sine quâ non* of any successful plan of treatment.

All this is well enough when it is absolutely necessary, and when the practitioner is well enough versed in uterine pathology or therapeutics to know what to look for; but in the majority of instances the speculum is introduced only because it is a fashionable instrument. The natural tendency of such an indiscriminate practice of examining females is certainly demoralizing, not only to them but to ourselves. It develops in the tender sex a looseness of morals which is, in the main, frightful to contemplate, and develops in the minds of not a few medical men a contempt for those attributes of female character which it is their duty to cultivate and to respect.

Already has this manifested itself in some of the papers published in medical journals, and in not a few monographs issued from some of our first-class publishing houses. The basis of the success of these documents is their sensational character, the real spiciness of which is centred in allusions which are far from scientific in character, and which are only calculated, by the detail of disgusting practices, to inform the uninitiated. And yet this is the character of literature that is fed by some of the first gynæcologists of the country, who conceive that for the purpose of ministering to a depraved taste, they are licensed in parading the most demoralizing instances of a devotion to passion.

The profession complain of the prevalence of abortions, of small families, and the practices which bring about these results; and yet there are not a few who take every pains to give in an indirect way the very information that swells the tide of a dangerous knowledge. We will not say that this is done purposely, but thoughtlessly, and that it is the offspring of a depraved taste, which has centred so much attention and thought upon the generative apparatus.

It is related that a noted infidel writer once consulted Benjamin Franklin upon the practicability of publishing an argument against the Deity, when the sage replied with characteristic significance: "My dear sir, as you value the moral welfare of your countrymen, do not unchain the tiger." We believe that some of us have been liberating the tiger in a somewhat different shape, but one which is capable of doing almost as much injury.

But not satisfied with this, a few of the progressive ones are going still further in their studies of the sexual functions, and are selecting women for the baser purposes of demoralizing and degrading experiment.

The following is a case in point:—An article appears in the *St. Louis Medical and Surgical Journal*, in answer to the query, How do the spermatozoa enter the cavity of the uterus? After reviewing the scanty literature of the subject, the writer treats the medical public with the details of a personal observation. The result of this observation is a conclusion that "the act of coition arouses some special nervous action in the uterus which causes the os uteri to open with successive gasps; that when the 'crisis' arrives, the external os is drawn into the cervix each time powerfully, and at the same time becomes quite soft to the touch." After the orgasm passes away the os closes and the cervix hardens, as before. He likens the performance to the motion of the mouth of the species of fish known as the "Sucker." This is a homely illustration, he is aware, but he knows of no other in nature which answers so well. He does not believe that the operation is either purely physical or simply mechanical, but

feels sure that the great nerve-centres have more or less the control of the matter, although, perhaps, this is not now demonstrable. The observation, noted above, was made thus: Having a female patient, blonde, aged 32, of a very amorous nature, with prolapse of the uterus in the second stage (the os uteri being just inside the vulva), he attempted to adjust the uterine supporter, and an examination by the touch was made. Upon introducing his finger between the pubic arch and the anterior lip of the prolapsed cervix, he was requested by his patient to be very careful in manipulating those parts, as she was very prone to have the sexual orgasm produced by very slight contact of the finger! Here, he acknowledges, was an opportunity never before afforded any one to his knowledge, and one not to be lost upon any consideration!! Carefully separating the vulva with his left hand, so that the os uteri was brought clearly into view in a strong light, he swept the right forefinger across the cervix twice or three times, when almost immediately the orgasm occurred, and what has been described was presented to his view!!!

However important it may be to demonstrate whether or not the os uteri opens or shuts during coition, we contend that in this case, even on scientific grounds, the end does not justify the means. It may be allowable to make experiments of this sort upon the lower animals, but ordinary propriety forbids it in a human female, between whom and her physician the same respectful relations should be maintained as between daughter and parent. The function of procreation has been thus far very satisfactorily and thoroughly studied upon the cold and warm-blooded animals; the development of the fœtus has been traced from the first segmentation of the vitellus, up to the period of birth; but to obtain such information, it has not been thought necessary to compel the human female to submit to any indecent, nay loathsome experiment. On the contrary, we have been content to draw our deductions from analogy, or to trust to the confirmation of theories by pathological developments.

The author speaks of his opportunity as being a rare one; may we hope that it will be the only one that shall occur either to himself or any other experimenter. The objections to such a method of establishing scientific points are so obvious, that they hardly deserve mentioning. In this case in particular, it was more than ordinarily objectionable, the deluded patient being either a professed masturbator or a nymphomaniac. In either event, in a physical point of view, it was very reprehensible. If the first supposition were well founded, there was an encouragement on the part of her attendant of a very bad habit; and if the latter mental condition existed, the patient was far from being alleviated by the manipulation.

But what shall we say for it in a strictly moral and professional point of view? We may give our investigator the credit of good intentions, but further we have nothing else to offer in his favor. We are well aware of the general acceptability of the saw, that "to the pure all things are pure;" but there are some things, such as this, which even science cannot divest of its immoral aspects.

In our relations to our female patients, too much care cannot be taken to preserve professional self-respect and sexual nonentity; but we question whether either can be maintained under the circumstances of such a case as we are considering. At least our female patients are not so much interested in furthering scientific research as to be ready to palpitate in the convulsive throes of an orgasm, merely to prove whether the os uteri opens or not. In view of all this, the question comes up, Are we not presuming a little too much for science, and are we not drifting into an indifference to ordinary decency, which, as a learned and dignified profession, we should take every pains to prevent?

Reviews and Notices of Books.

A Year-Book of Therapeutics and Pharmacy, and Allied Sciences. Edited by H. C. Wood, Jr., M.D. New York: Wm. Wood & Co. 1872.

Many of the numerous articles upon therapeutics, which appear from time to time in the various medical Journals, are of so much benefit to the profession, that it has been deemed expedient to devote departments in many journals, which shall give in a concise manner a synopsis of them. Besides this, so great is the interest now being taken in therapeutics, that special journals are devoted to their consideration, and even such encyclopædic works as Year Books have been found necessary to keep pace with the progress. In order to supply a want very much felt in this country, Dr. H. C. Wood, Jr., has started a special journal on this subject, which is called the *New Remedies*, in which he gives quarterly a resumé of the subject. In order to render the work further acceptable, he culls the most practical parts and forms a volume, which it is his intention to issue yearly, with the title prefixed to this notice. That such a work will be acceptable, and even urgently wanted by the busy practitioner, the sight of the many unread journals which accumulate upon his table will fully attest. The book is divided into four parts: one upon therapeutics, a second upon materia medica, and the third and fourth upon prescriptions and formulas and general receipts. The therapeutic section is particularly rich and valuable, embracing articles upon every disease, medical and surgical. The resumés are clearly and concisely written, and are, we are glad to see, generally taken from the original articles, not, as is so often done, mere reprints of the abstracts made by others. In this we think Dr. Wood is wise, for we have often noticed abstracts, originally badly made, which had been copied into more than one journal. Another feature of the abstracts in this work is, that they are drawn from such a variety of sources, foreign as well as domestic; this is especially commendable, as the majority of journals present abstracts mainly of articles written in the English language. The remaining chapters are equally as valuable as that upon therapeutics.

In conclusion, we must express our approval of the work, as a comprehensive and practical compendium of current therapeutics.

History of Medicine, from the Earliest Age to the Commencement of the Nineteenth Century. By Robley Dunglison, M.D. Arranged and Edited by Richard J. Dunglison, M.D. Philadelphia: J. B. Lippincott & Co. 1872.

The editor of this work, who was the son of the author, tells us that it is the embodiment of a course of lectures delivered by his father, when Professor in the University of Virginia. Having been originally prepared for lectures, the work, of course, lacks that completeness which we observe in some of the French and German works upon the same subject; yet a careful perusal of it shows that it gives a tolerably fair view of the subject, though there are branches of it which we think might have been elaborated to a greater extent, and thereby insured the value of the work. The work is certainly clearly and concisely written, and its facts are put in a very readable manner. The author traces the origin of medicine in the various ancient countries, and shows us that it was first cultivated by the Egyptians, and his description of the process of embalming is very interesting. The brief life of Hippocrates is very pleasantly written, and the influence of the Greek physician is clearly shown. We are somewhat surprised that the Arabian school and its history is not so fully brought out as its importance deserves. The life of Galen is quite fully given by the author, in a chapter which is very well written. We are sorry to find that the history of the origin of syphilis, and of the mediæval scourges, is not at all alluded to, and that Harvey's position in medicine has been neglected. In fact, the work can be only looked upon as one of a very limited field, and one which in many instances does not do even bare justice to the subject, which certainly is one of great interest.

Worms: A Series of Lectures on Practical Helminthology, delivered at the Medical College of the Middlesex Hospital. By T. Spencer Cobbold, M.D. Philadelphia. 1872.

The subject of Parasitism is one which has been studied by Dr. Cobbold for very many years, and his large work, devoted to a consideration of the natural history of animal parasites, occupies now the position of a classic. In the present work, the author endeavors, in the course of twenty lectures, to give us a general description of the parasites, their mode of origin and transplantation, their development, and the symptoms produced by them when they infest man. In speaking in a general way of the natural history of these minute creatures, Dr. Cobbold gives us a very clear and accurate picture; and as he shows in what way man becomes infected, his remarks have practical value in the matter of prophylaxis. Every practitioner is aware of the anomalous nature, and of the obscurity of the symptoms of worms, and we think that the author has materially enhanced the value of his work by the introduction of illustrative cases. The chapters upon tape-worms are certainly excellent, and the same may be said of that upon trichiniasis. All things considered, we think that this work will supply a want long felt, as this subject is not well brought out in text-books, and is almost ignored in the courses of medical lectures.

The Men and the Acts of the Insurrection of Paris seen by the Light of Morbid Physiology. By J. V. Laborde, M.D. Paris: G. Baillière, 1872.

Physicians have contributed quite extensively to the literature of the war of 1871. This little book is such a contribution. Our author begins by citing the momentous warning of Guislain to our would-be civilization, that the condition of modern society keeps up a cerebral excitation which can be likened to drunkenness; that it is wide apart from the normal conditions of mankind, and must predispose to intellectual troubles; thence turning his regard more especially towards his own country, Dr. Laborde, says: "The French society is sick in mind and body, it belongs to the physician and moralist more than to the historian;" and quoting again, he says: "A wind of insanity has been blowing over it (*Un vent de folie a passé par là*)."

These generalities promised well, and we expected to see the physio-pathological problem—which is burning in France, hot in England and Germany, and fermenting in the United States—treated by an acute and impartial mind; but our author hardly enunciates his proposition when he begins to beg the question by this remark: "Since half a century, the popular and working classes of society have been laboring under an uneasiness which instinctively carries them to the research of a better fate. From this irresistible movement are born all our perturbations, and the political and social commotions which have taken place in our time. And why these commotions?" This *why* should have been the object of the study of the position assumed by the classes whose interest conflicts with that of the working-men and women. But the Dr. does not seem to have given it a moment of thought; and with the (aplomb) assurance of an alienist he assigns as the cause of popular discontent, the hereditary predisposition of some individuals to insanity.

The mental disease under which France bends her noble head, the real object of the study of a psycho-pathologist, lost sight of by Dr. Laborde, is this: Shortly after the declaration of American Independence, the French Nation, in council assembled, declared the classes abolished, and the Nation a Unit, under the rule of Equality. The people believed in this Declaration of Rights, the ci-devant classes only submitted to it. From this discrepancy of the minds composing a great empire, has been produced the mental disease whose symptoms are the revolutions and the reaction of the last eighty years.

The old classes, badly off for a time, fortified themselves by the accession of the Tiers-Etat, who showed where money was, and how to get at it. Thence, the coalition, not content with the best lands, houses, church and state appointments, thought of turning into their pockets every new source of modern industry and wealth. To that end they possessed themselves of the legislative power to create new titles of property over human labor, and by these fraudulently legal instruments deeded to themselves the new industries, railroads, steam navigation, telegraphs, &c., to buy off and pay the forces—soldiers and priests—that keep the people working in the lowest conditions of intelligence and vitality.

To do this the nation must be disarmed and the bullets kept in the hands of pretorians—which was done. Children were taught submission—not knowledge; the executive power was entrusted to one who would kill whoever he could not buy. But woe to the aspirant who could not fulfil these conditions. When the spokesman of the conservative party of 1848, Granier de Cassagnac, had said, *Il nous faut une saignée de* 60,000 *hommes*, which means, we offer the power to the one who will kill 60,000 workmen, he, Cavaignac, bid for it, and ignominiously lost it by killing only 20,000 in July. Napoleon could kill more in December, and ruled. This policy—we might as

well say monomania—of the ruling classes of France is so set, that even to-day M. Thiers could not remain President of the French Republic if he was not keeping the Parc aux Certes of the conservatives well supplied with the wild game caught in Paris during the Commune. Not that the little Carthaginian is particularly fond of blood; personally he prefers a joke; but he could not remain in power a week if he was not serving to the lords of the church, of the land, and of the stock-exchange, a communist on the tray (plateau) de Satorry as an appetizer before breakfast.

Thus are the ruling classes determined to rule and eat, and have the working classes work and submit.

To this the working classes demur; and with the *Declaration of the Rights of* 1789 on their banner, they protest, conspire, fight, execrate, and eventually become insane, as other people do when their ideal is broken. But generally they emigrate, like their forefathers, after the slaughter of St. Bartholemew and the Revocation of the Edict of Nantes. Thus, when the yoke of the governing class of Italy became unbearable, her skilful women and men migrated to France, and began to master the arts which made her glorious. By the insanity of her ruling classes, France, in her turn, will lose her artists and artisans, and be farmed and famished, like Spain and Mexico, by noble brutes, lecherous priests, and vile peons; and Guizot will be enabled to repeat for the third time what he said with his most cadaverous voice of Warsaw and Lyons: "Gentlemen, order reigns in France."

Dr. Laborde disregards these fundamental elements of the French psychological problem, and looks for its solution to the existence of insanity among the Communists only. But even in this narrow view of his, he fails to see that the French army—who avenged so unmercifully its defeat by the Prussians upon the doomed Communists—contains itself more insane than any other equal number of men. See *De la folie chez les Militaires, in Annales Medico-psychologiques*, July, 1872. And again, crossing the Seine, he should have observed, in the Asylum of Charenton, that not only insanity is rife, but is on the increase among the supporters of *order* and *society*. By taking a retrospective glance, the Doctor could have remembered that in all great national calamities, and particularly in great besieged cities, in Jerusalem, Rome, Saragossa, Paris under Henry IV., as in 1871, the insane made themselves notorious, though being only accessories, in the events which have provoked, if not caused, their disease.

We wish we could plead narrow-mindedness, too, for the view taken of the heroism of Flourens in this book. His place is with Curtius, Fabius, Henri de la Tour Dauvergne, St. Just, and Lebas.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 25, 1872.

Dr. A. L. Loomis, President, in the Chair.

EPILEPSY PRODUCED BY INJURY TO SCIATIC NERVE.

Dr. Brown-Séquard exhibited by invitation several Guinea-pigs for the purpose of illustrating the epileptic phenomena attending injuries to the spinal cord and to the sciatic nerve. The fits in all the animals were instantly produced by a slight pinching of the integument on the side of the neck between the ear and shoulder.

The first pig was one which had suffered an injury to the cord by an operation performed by Mr. Dupuy. Precisely what portion of cord had been touched could not be ascertained, but the epileptic phenomena were as easily produced in this one as in any of the others. He believed the fits to be epileptic for the reason that they were characterized by the three prominent features always associated with such attacks, viz.: 1. Clonic convulsions; 2. The loss of consciousness during the seizures; and 3. The disturbance of the mind after the attack.

In two or three of the animals one or more toes were missing, due to the circumstance that during an attack the members not unfrequently found their way into the mouth and were bitten off. This was, by the way, a very satisfactory and practical way of proving an error in nutrition. A curious circumstance in reference to the absence of toes has been noticed in the offspring of such animals as have this deficiency as the indirect result of an injury either to the spinal cord or the sciatic nerve: viz., that the deformity is not only inherited but the epileptic seizures also. Another fact of curious interest is the falling off of the hair of the part the irritation of which produces the attacks, which disposition is coincident with commencing recovery from the seizures. Recovery never takes place after injury to the cord, but the opposite is the rule when the sciatic nerve is subjected to operation. Whenever one particular side of the cord or the sciatic nerve of one side is injured, the power of producing fits resides only in the skin of the shoulder of the same side.

In these cases it is not very rare to find an effusion of blood between the integument and cartilage of the ear the same as has been frequently noted among the insane, and due, as has frequently been proven, to some trouble in the brain. He had discovered that this condition was almost invariably the result either of an injury to the medulla oblongata or to the corpus restiforme. This hemorrhage generally under these circumstances shows itself within a day or two. In an animal experimented upon by Mr. Dupuy, nearly the whole ear was involved during the short period of one night. This condition, as has been often noticed, was quickly followed by gangrene and a falling off of the hair of the integument of that organ. He had sometimes met with the same thing as the result of an injury to the sciatic nerve.

The subject was brought to the notice of members of the society; those who may have the desire and the opportunities to follow this study might continue observations in the same direction, with the result doubtless of adding much to our positive knowledge of nervous diseases.

TUBULAR ANEURISM.

Dr. Briddon presented a specimen of aneurism with the following history:—

The man from whom this specimen was removed presented himself at my office in the year 1868, complaining of pain in the right side of the chest; he was a remarkably fine-looking man, of forty-five years, weighing two hundred and ten pounds, and measuring six feet two inches; he was free from syphilitic taint, and had a good family history; on examining his chest I found the physical signs of aneurism of the arch, advised him of the fact, and put him on large doses of iodide of potass; after this I saw him only occasionally, when confined to his house by unusually severe attacks of pain, and in the intervals he would float off into other hands;

and I believe has presented himself in the consulting room of every professional celebrity in the city. Two years ago he became gradually aphonic, from paralysis of recurrent laryngeal, for which he was treated by a specialist with atomized solution of nitrate of silver. Subsequent to this, he began to suffer from bronchorrhœa, which persisted up to the time of his death.

August 3d of the present year (1872) he had a severe rigor, and lancinating pain in the left side. In my absence he was seen by Dr. Robt. W. Taylor, who diagnosed pleurisy with effusion. When I saw him on the 6th, the left pleural sac was full of fluid, he still suffered from pain, his breathing was accelerated, but he did not appear to suffer from dyspnœa, and his temperature was above the normal. Hypodermic injections of morphia were used to allay pain; he was put upon iodide of potassium and tinct. digitalis; and a large fly blister was applied to the side.

For several days after this he appeared to improve; his breathing still remained frequent, but it at no time amounted to dyspnœa. On the 16th of August, and four following days, he had irregular but severe rigors; his temperature averaged 101°, pulse 120, respiration between thirty and forty; he could lie on his back with comparative ease, but was much annoyed by cough and purulent expectoration.

On the 21st I went prepared to perform thoracentesis, intending to use the capillary trocar, but he was shaking with a chill at the time of my visit, and I postponed exploration for the following day; in fact I did not think there was urgent call for interference; the dyspnœa was not at all pronounced, there was no bulging of the intercostal spaces, and no displacement of the heart, and I suspected that he was suffering from septicæmic infection. He died on the following day half an hour before my visit.

Autopsy was made five hours after death. Rigor mortis was well marked, left half of chest contained about a gallon of very fetid sero-purulent fluid; the left lung, carnified, was prevented from being crowded towards its root by several very strong pillars of old adhesions. One of these, of the thickness of three or four fingers, bound it to the diaphragm; others equally thick bound it to the lower, lateral, and posterior walls of the cavity; there were no adhesions of recent formation.

The mucous membrane of the bronchi and trachea was of a dark maroon or chocolate color, and contained more or less fetid pus; there were no vomica.

The heart in its normal position was much enlarged. The increased growth involved principally its ventricles, the walls of the left being estimated at one inch and a half, those of the right three-quarters of an inch; cavities of both were diminished; enlargement of aorta commenced immediately above the sinuses, occupied the three divisions of the arch, but was most marked in the transverse portion, which would contain the closed fist; perched upon the top of the arch was a dilatation of the innominate which would have contained a large hickory-nut.

The aneurism was of the tubular variety, but at several points there were prominences, indicating the tendency to sacculation; there was but scant deposit of laminated fibrine, and that was principally confined to the inferior wall.

Remarks.—The autopsy in this case revealed a condition that made me regret that I did not resort to tapping. I think such an opening as would have ensured a free escape for the fetid contents of the chest, and the use of local disinfectants, would have prolonged the man's life for a short time at least. For some time previous to his last sickness he had had profuse and occasionally fetid expectoration. I was impressed with the idea that abscess, situated either in the adventitious tissue outside the aneurism, or in the mediastinal space, had opened into the bronchi. The expectoration, sudden and profuse in its beginning, appeared to justify the suspicion, though unsustained by physical signs. When he began to have the irregular chills four days before death, the expectoration almost ceased and became difficult, and I concluded that he was suffering from systemic infection, and this suspicion was my chief reason for not performing Thoracentesis.

My experience has not been large in such cases. I have tapped the chest on five different occasions; three times for empyema, once in a case where the pleura was lined by solid exudation one inch, and in some places one inch and a half thick, enclosing fluid which was not purulent; and once in a case of pyo-pneumothorax; in the last case the pleura was perforated by the extension of a vomica; the chest was distended to its utmost by decomposed pus and air, and the dyspnœa was urgent, an opening large enough to admit the finger was made, and the cavity was washed out with a pail of water every day—the water being slightly impregnated with a disinfectant.

A child of four or five years was placed under my care, some years ago, in the New York Dispensary; it was the subject of pyothorax. I emptied the contents of the chest, and experiencing difficulty in keeping the opening patent, I made a second opening in the same intercostal space, at a distance of two and a half inches from the first, and through these I introduced a seton. I saw no more of this patient for many months. When passing through one of the tenement-houses of the first ward, my attention was drawn to it, as an old patient. The seton was still in position, but the chest was retracted, and the empyema cured. I removed the seton, and that was the last of it.

Other cases have not been equally fortunate. Two years ago I was requested by a medical friend to see a poor man who was suffering extremely from dyspnœa, occasioned by pleurisy with effusion. I expressed a most decided opinion that nothing but tapping could afford him any relief. My friend was unwilling to share the responsibility of such a proceeding, and I saw no more of the patient for three days, when he was almost in "articulo mortis." I tapped him in the presence of his physician and Dr. John Corson. The patient died whilst the pus was flowing through the canula.

About a year ago I visited a man, for the first time, who was dying from the dyspnœa of effusion. His heart was displaced to the right of the sternum, and his labored breathing was fearful to behold. I sent the nurse for a trocar, and a medical friend who lived in the neighborhood, but before his return the patient turned over on his side, became convulsed, and died.

In the last case referred to, I am convinced that paracentesis would have saved life, and I believe that such cases are far from uncommon. Over-distention of the pleura, with simple serous exudation, may kill by interference with the circulation, through displacement of the heart. It may do so by asphyxia, or it may do so indirectly by compression of the lung, favoring subsequent degenerative changes in that organ.

After the failure of the host of therapeutic agents in use in such cases, lessening the tension of the sac, by so simple and safe a measure as capillary trocarization, even if only a portion of the contents be discharged, is generally followed by rapid absorption of the remainder. Probably I ought to say that the use of the aspirator should take precedence, or be used in conjunction with the other means.

I exhibit to the Society the pneumatic aspirator,

made by Aubry of Paris; the instrument resembles the old irrigateur; it contains about eight ounces; it is very efficient, simple in contrivance, and not easily deranged. The imported instrument is expensive on account of the duty. Mr. Stohlmann, of the firm of Tiemann & Co., is making some precisely similar, on very moderate terms.

Dr. Loomis remarked that he had used an instrument similar to the one exhibited by Dr. Briddon, in four cases. In all of these it was for the removal of fluid in the peritoneal cavity. It seemed to him that as far as the efficiency of the instrument was concerned there was nothing more to be desired. The withdrawal of the fluid was so gradual that there was ample time for the expansion of the chest, and no danger of air entering the pleural cavity. The only way in which this latter accident was possible was in consequence of an imperfect fitting of the glass tube in the exit pipe. As this tube was only inserted in the rubber tubing for the purpose of ascertaining the character of the fluid flowing through, he thought it might be dispensed with.

Dr. Van Geison asked if the danger of air entering the chest in such cases was not exaggerated. His own experience in the operation of paracentesis thoracis was limited, but he had not seen any bad results from the so-called accident.

Dr. Briddon remarked that Albach has related a case in which the lung had been wounded by a trocar in this operation, but without evil consequences.

Dr. Loomis stated that there was no doubt that air might enter the pleural cavity without destroying life, but he was convinced that the chances for the recovery would be much better when care was taken to guard against the complication. Recovery is much more likely to occur in children after air has entered the pleural cavity than in adults; the former, as a rule, bearing the operation much better. He had frequently evacuated the pleural fluid with an ordinary trocar just sufficient to relieve the urgent symptoms, when the whole effusion would from that time commence to be absorbed.

Dr. Van Geison referred to the case lately reported by Dr. Markoe, of a child upon whom that gentleman had made a free incision into the chest cavity for pleural effusion. In that case the patient, aged only six weeks, made a good recovery.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, September 19, 1872.

Dr. Samuel S. Purple, Vice-President, in the Chair.

YELLOW FEVER—IS IT CONTAGIOUS?

The Secretary read a letter from Dr. Edward J. Tilt, of London, acknowledging his election as Corresponding Fellow.

Dr. Wm. C. Roberts, First Vice-President, announced the deaths of two Fellows—Drs. Everett H. Kimball, and Charles Henschel; and then made the following remarks on "Yellow Fever.—Is it Contagious?"

This question, in spite of all that has been said and written about it, is not yet a settled one, "adhuc subjudice lis est." It is really a difficult one, and seems as if it must rest as much upon theory as on fact. Yet it is an important one, for upon its solution must rest the propriety of or necessity for quarantine regulations, to exclude it or prevent its spread.

It presents the curious feature that a large body of men, who from personal observation had warmly espoused the doctrine and belief of its importation and contagiousness, or its contagious character when believed to have originated spontaneously, have subsequently abandoned this creed in favor of an opposite one, which they have professed with equal enthusiasm. Of a still greater number, I acknowledge, and of late more particularly, who disbelieve in one or the other, and oppose quarantine regulations in regard to it accordingly. Of men who, having been once anti-contagionists, have become contagionists. Of more who believe in the specific nature and origin of yellow fever, and of others who look upon it as non-specific, and as differing but little, if at all, from bilious fevers of a high grade. Of some, again, who believe that originally non-specific and non-contagious, it may become both under certain circumstances, more particularly of impurity of air, etc. Who believe that a vessel, starting from an infected port, and filled with an atmosphere simply infectious, may have that air so changed in the course of her voyage, by filth in her hold, or sickness among her crew and passengers, or on her arrival be exposed to certain influences which may impart to that air, originally simply infectious, a contagious property. Each of these views are maintained by men of ability, and by seemingly convincing proofs and arguments.

The contagionists and importationists rely upon the fact that the disease has not existed in a port, or prevailed in it before or until the arrival of an infected vessel, and is derived from contact with her and at certain distances from her; and they adduce instances of direct personal contagion with the sick, which, if correct, would suffice to establish the contagiousness of any other disease acknowledged to be such.

The non-contagionists deny its importation, and point to immense numbers of instances in the histories of yellow fever epidemics in which, under the most favoring circumstances and fairest opportunities, neither has the disease been propagated from the sick to the well, nor even become epidemic. Thus it appears that there exists a wide diversity of sentiment upon the subject, and that much admits of being said upon either side of the question.

If the cause of the disease be specific, and the disease itself one of specific character, it seems to me that the exhalations and excretions from the sick must contain a specific contagion when operative, which it is not always, any more than any other specific contagion; not perhaps oftenest, as respects yellow fever, which is very fortunate; but yet, when it does infect by this medium, infecting by contagion, the disease being *ab origine* and in nature specifically contagious; and once so, always so. Can we believe or admit that a disease originating in one and always the same specific cause, can so lay aside or change its nature so that it shall be at one time contagious and not so at another? Would any one assert thus of small-pox? Or must we believe that there exists a yellow fever which is, and one which is not, contagious?

Infection, according to my idea of it, is the reception of disease caused by the influence of some of certain causes, some paludal, or of vegeto-animal putrid origin (the decomposition of vegetable and animal substances, the former chiefly) as intermittent, bilious, and perhaps yellow fever, and typhoid as well; others, again, of meteorateous origin, as whooping-cough and influenza; while others, again, as all the exanthemata, typhoid and typhus, and cholera, possessed the property,

whatever may have been their origin, of not only infecting, but of containing within themselves, seeds of disease which, entering into, and capable of a multiple increase and zymosis, or fermentation, in the bodies of the sick, capable of exhalation from them by the various emunctories of the system, and of further extension by zymosis and multiplication in, and by the medium of the atmosphere, constitute the infectio-contagious diseases usually classed as zymotic; and the medium of contraction is by personal contact, through an impure and infected atmosphere.

This is contagion; and such diseases are classed as contagious. The infectious element existing in the atmosphere, dormant at times and active at others, or that recently reproduced in and exhaled from the bodies of the sick, and absorbed by the lungs or stomach into the blood, produces in the recipient always the same disease as that which furnished the germ; the germ is specific, and so is the disease and its contagion. All specific contagions reproduce their like, with little or no hybridity; small-pox, always small-pox; measles, always measles, and so on.

It may be contended that all poisons are specific which produce any particular disease, as that which produces intermittent. But that is not so, for sometimes the cause pro luces intermittent, sometimes bilious fever, and sometimes bilious fevers change their type and become intermittent. This is not true of specific contagions, which, although they may put on a typhoid aspect, are always in nature, and originally the same; and thus it is which gives to them their specific and contagious character. Some diseases, whether or not their cause may be deemed specific, are certainly not contagious; as intermittent and bilious fevers, and influenza. Something more, then, is needed to render them contagious than mere specificity of cause; something in the nature of that cause which renders them both specific and contagious; which makes one kind of high grade bilious or yellow fever, simply infectious, and another contagious, as well as infectious; and in what this difference consists is probably unknown. Why is epidemic influenza non-contagious (although some incline to think it may be), and whooping cough contagious? There must be a difference of course.

Some of these are, and some are not, communicable by means of fomites. If, in the case of say yellow fever, these fomites are impregnated with nothing but the infected air contained in the hold of the vessel brought from the infected port, or absorbed in it, which is commonest in yellow fever and cholera, or typhoid, the disease is simply communicated by infection; but it may be infection of a specific contagion, or not, as it happens.

It has been supposed that blankets folded up in places infected with intermittent malaria might have produced intermittents when opened at a distance; but the infection was not contagious, although it would be specific. But if these fomites contained in or upon them, and were soiled and impregnated with the specific emanations from the bodies of persons laboring under specific and contagious diseases, they would convey contagion, or infect by contagion of the specific germs of the disease. I believe it can be shown that this is true of typhoid fever, cholera and yellow fever, which I deem, therefore, to be contagious diseases. I am not sure that it is not true of whooping-cough as well. The germ in the one case has not, and in the other it has, the contagious and zymotic property; this is the difference between infectious and contagious diseases, all diseases capable of reproducing in the body the specific germ and exhaling it, are contagious diseases. They are, then, all zymotic, and all zymotic diseases are contagious necessarily, in greater or less degree. The germ was originally zymotic, however first engendered; and thus the diseases they produced originally never existed and ever since extended through their seeds wherever they have entered or existed; always leaving behind a stock of contagion wherever domiciliated, to remain dormant at intervals; to awaken at times, under certain predispositions of person or atmosphere, and to become sporadic, endemic, or epidemic. Some we have always with us. Some come only at intervals, by atmospheric or personal portability; but in the habitat and locality of their origin they are never extinct. At what time, therefore, they may come, cannot be told; but they are ever imminent and to be expected, and too much care cannot be taken to oppose their first entrance, for from a small spark great fires may be kindled, and a little leaven leaveneth the whole lump.

Epidemicity, at most, necessarily implies contagiousness. The causes of diseases, although similar, are not identical. Those of intermittents and bilious remittents, and yellow fever are not, nor are the two latter identical diseases. Yellow fever is not a remittent fever, nor is it cured by bark which is specific in the other two. It is a continued fever, and it is fair to suppose that it arises from a different specific cause. All endemic and epidemic diseases arise from specific causes, but however much they may seem to resemble each other, are not identical.

As regards the property of diffusing its own specific germs, inter-corporeally multiplying, zymotically reproducing, and atmospherically diffusing, in yellow fever, while I admit that the weight of authority is against me, all analogy and probability seem to be upon my side; and there are not wanting many able writers and observers who claim for it an action, or at least a contingent or qualified contagiousness, governed very much by the actually existing predisposition of the recipient, etc.

The question is one of practical value, because, if yellow fever can be shown to be contagious, however little so, the same precautions with regard to it should be adopted towards the sick, nearly or quite as much as in those laboring under typhus, or small-pox, or cholera; and strict isolation, as far as possible, and disinfection would be as prudent or indispensable in the one case as in the other. I have been lately favored with a sight of an old volume, entitled, "A Collection of Papers on the subject of Bilious Fevers prevalent in the United States for a few Years Past," compiled by Noah Webster, Jr., New York, 1796. It contains, among others, an "Account of the Epidemic Yellow Fever of New York in 1795, by Valentine Seaman, M.D.;" an "Account of the same, by Elisha H. Smith, M.D.;" and an "Account of the Fever in New Haven, in 1794, by Drs. Eneas Munson and his Son." The quaint simplicity, but elegant perspicuity of the style of these essays, the candor and honesty of purpose they display, the accuracy of observation, practical sagacity and discrimination which they evince on every page, renders it impossible to read them without entertaining feelings of the most respectful admiration of their worthy and benevolent authors. The eagerness to do good to suffering humanity, without regard to personal or professional reputation, or notoriety, or partisanship; the close adhesion to facts, and care taken to deduce conclusions only from them, without redundance of words, or pretentious displays of learning, renders them models of composition which might advantageously be studied at the present day.

This fever in New York swept off 700 persons in its partial operations; among the rest, Dr. Malachia

Treat, Health-Officer of the Port. It occurred more particularly among the poor and in the filthier portions of the city. Dr. Seaman is a non-contagionist, and assigns many cogent reasons for his opinion. He "has not heard or known of a single case, well authenticated, of a person taking the complaint from another that was affected by it." I judge that he deemed it to arise here spontaneously, from sources of putrefaction; and where infection was general, clear proof of contagion might be difficult. Dr. Smith agrees with Dr. Seaman as to the source and non-contagiousness of the fever. He disbelieved in its importation, no direct, no clear evidence of which, he says, ever has been or can be produced. "We ought," he says, "to look at home for the sources of this fever." It was endemic, non-contagious, and a higher grade of that which prevails here, in the same season, every year. Bleeding was his sheet-anchor, and bark proved injurious.

It would, however, but little serve my present object were I to content myself with simply relating the opinions of these non-importationists and non-contagionists. Fortunately for me, the same volume contains facts in rebuttal, which I proceed to bring forward in aid of those I had already cited in support of the opposite side of the question.

In the letter of Dr. E. Munson, Jr., we find that early in June, 1794, a vessel arrived in New Haven, from Martinico, having on board a chest of clothes—whether soiled or not I cannot say—belonging to a sailor who died of yellow fever in Martinico. The vessel lay in front of Isaac Gorham's store. This chest was opened in the store of Mr. A., in presence of Capt. I., Mr. A., H. H., and Polly Gorham, the last three of whom sickened and shortly died from the exposure to the contents of the trunk. So far this was infection only. Isaac Gorham's wife, living on the wharf, died of the disease—infection again. A child who had stayed a week in Mrs. I. G.'s died, and several others who had visited the house. So far, perhaps, all still infection only. But now for the contagious part of the story. Mrs. T., who had nursed in Mrs. I. G.'s family, sickened, and had moved half a mile from Mrs. G.'s, and Father Fitch *caught the disease from her, and communicated it to his servant-maid.* If these are not instances of personal contagion, from an infectio-contagious poison—supposing them to be reliable, and why should they not be?—I am unable to conceive that the idea of non-contagion from personal contact with the sick should, by any sane mind, be any longer entertained.

"I could trace the disease," says the doctor, "through the town. No person had it but those *who attended the sick*, or were exposed by nurses, infected houses, clothing, or furniture."

In 1795 Capt. J. Smith contracted the disease in New York, and died of it in New Haven, Aug. 20th, communicating it to one of his negro servants.

Several persons died of yellow fever at Mill River, in Fairfield County, and at New London, in Aug. and Sept., 1795. It was introduced and propagated there by infected persons from New York. No case of yellow fever had been known before these in New Haven, except that, in 1743, a transient man from the West Indies died there at the inn of Mr. Brown, taken sick in the night; and Mrs. B. sickened in a short time and died of the same disease, which was supposed to be yellow fever. The total number of deaths in New Haven from June to November was 64. "The disease," says Dr. M., "was attended with specific contagion in every instance." It is curious that while Dr. Munson asserts this, he should say that scarlet fever and measles prevailed extensively, and were evidently epidemical, while yellow fever was propagated only by contagion; as if scarlet fever and measles were not also Dr. M. believes yellow fever always to be an imported disease, never originating here; that it was propagated in no other way than by contagion; and that this is a "specific contagion, and no more diversified than that of small-pox or measles in its operation on the human system." He says the disease was milder in the cases where it was derived immediately from the bodies of the sick, than when from fomites. He wonders that Hunter and Moseby should deny its contagiousness, whereas, he says, the contrary was demonstrated with us by the most obvious facts. After quoting Jenner, to show that animal putridity, bad smells, and cadaveric inspection do not cause pestilential disorders, in which views I have already expressed my coincidence with him (see *N. Y. Med. Jour.*, 1870), he concludes that the contagion of yellow fever is a specific one, and in this country propagated by animal poison, in a gaseous form (?), proceeding from a living human body diseased; views which, I think, stamp him as a man of unusual sagacity and penetration. The elder Munson coincides in this opinion.

The editor of this "collection of papers" infers, I think very justly, that yellow fever may be generated in some places and imported into others; is not always, or everywhere, or ordinarily, attended with specific contagion, but may be rendered such by peculiar circumstances which conspire to increase its malignity. He says it seems to be proved that in New Haven it was introduced, and infectious; *i.e.*, contagious; in Philadelphia it was admitted to have been to a considerable degree contagious; in Baltimore, not "infectious;" in New York (?) and in Norfolk, not introduced, and not propagated by infection, using this term as a synonym for contagion.

Following the recapitulation of Aitken's views (Am. edition, p. 477), the speaker remarked: In the "Letters on Yellow Fever, Cholera, and Quarantine," etc., by the late Alex. F. Vache, M.D., are scattered here and there proofs of the personal contagiousness of yellow fever. On page 19 ("Letters of Jos. Bayley, M.D., Health Officer in 1821, to the Mayor") are related the cases of yellow fever in the Sinclair family. The mother washed some foul and filthy clothing of persons who had died of yellow fever, and died in five days. The daughter Jane, who assiduously attended her mother, and also the father, died, and a sister sickened, but recovered. Dr. Bayley infers that the mother caught the disease from the foul clothing, and the other three from her, by personal contact. Dr. H. M. Vandyke, assistant physician to the hospital, also recovered from an attack of the fever, which, as he had not been on board of any infected vessels, he could only have contracted by attendance on the sick, clothing, or cargoes in the public stores. Dr. Vache, however, who furnishes these statements, did not believe in contagion from personal contact; but he did believe in danger from clothing infected and soiled from the bodies of the sick. Now, if these contain the specific germs of the disease thence emanating, animal and zymotic, and to infect they must, they are as much instances of infectio-contagion as if they had been steeped in the purulent secretions of small-pox.

The views of the late Prof. S. H. Dickson, M.D., were quoted by the speaker to confirm its contagiousness; and he further remarked, that the opinion so strongly expressed and maintained by the late Dr. Hosack, that yellow fever is only contagious through the medium of impure air, so justly opposed by Dr. Chisholm of England, is also contradicted by the letter to Dr. H. from the Rev. Richard Channing Moore, M.D., afterwards Rt. Rev. P. E. Bishop of Virginia (then of

Staten Island), entitled "Facts relative to the Contagiousness of Yellow Fever in the purer Air of the Country." (See *Am. and Phil. Register*, 1812, vol. ii., p. 122.)

In this connection, I will cite proofs of the contagiousness of yellow fever, to be found on p. 143 of Strobel's "Essay relating to the Epidemic of Yellow Fever at St. Augustine," 1821.

The convictions of Drs. Edward Miller (reproduced in the Appendix to his edition of Thomas's Practice, 1811), Rush, Hosack, and Laroche were alluded to. He then said: Now, whoever, after a review of the foregoing considerations, shall deny that there is a specific and distinct yellow fever, arising spontaneously in certain localities, at certain seasons, and from certain favoring specific causes; specific in this, that, like all others, they are capable of engendering the one only disease; that the atmosphere containing the germs of this disease is capable of being conveyed or transported from infected places, in the holds of ships and in fomites, to others; that, being diffused from them to a certain distance beyond, and from the infected fomites, intensified, perhaps, by the filthiness of the vessel's hold, personal uncleanliness or privation, impure air, bad food, sickness among the passengers and crew, thus not only are individual cases of sickness induced, but epidemics are engendered even in large cities, as has frequently happened, when the disease has been introduced, until which period it had never prevailed before, and even then at only long intervals. Whoever, I say, denies this, denies what the history of many epidemic prevalences of yellow fever, in various parts of the world, abundantly demonstrates, and is almost universally conceded. Furthermore, it seems to me to have been abundantly shown that yellow fever possesses a qualified, contingent contagiousness, from personal contact with the sick, which in many instances has been as clearly shown as that belonging to any other specific poison; and that, reasoning from analogy, it is, and must necessarily be, although not always demonstrably so, of its very nature personally contagious, because it results from exhalation of specific germs from the sick, with excretions and dejecta, similar to those which induced it. Everywhere the train of phenomena resulting from the introduction of the poison and the outbreak of the disease has been in varying degrees of severity the same. The history of one epidemic has been the history of all.

Correspondence.

CONCERNING PEPSIN.

To the Editor of the Medical Record.

Dear Sir:—If the experiments detailed below have not been anticipated by other and more reliable observers, or if the communication is of sufficient value to publish, do so.

My attention was attracted by an article in the Medical Record, Vol. vii. p. 200, to a simple, and, as it has proved, reliable mode of procuring pepsin. Dr. Lionel Beale, who is the authority for the procedure, declares "that very much of the pepsin sold is entirely valueless."

At my request, a competent pharmacist of this city recently prepared some pepsin, according to the formula detailed in the article above referred to, and subjected the pepsin, together with two prominent preparations, one of foreign, the other of domestic manufacure, to precisely similar conditions; namely, eight grains of pepsin with ten drops of hydrochloric acid and one ounce of water were added to one hundred grains of hard-boiled white of egg. The three vessels were kept for twenty-four hours at, as nearly as possible, 100° Fah. The result was, the entire dissolution of the albumen in the preparation, according to Dr. Beale, while of the other two, sixteen grains of the foreign, and twenty grains of the domestic manufacture, remained undissolved.

The practical lesson to be learned by this experiment is, that every pharmacist should prepare pepsin at his own establishment, just as he does his tinctures, syrups, and other preparations. Pigs' stomachs to any amount can be easily obtained at the hog-slaughtering establishments, while the mode of preparing is so simple as to insure uniform results.

Very truly yours,

Wm. C. Hunter.

255 Sixth avenue.

STRICTURE OF THE URETHRA,

WITH COMPLETE RETENTION OF URINE, SUCCESSFULLY TREATED BY PUNCTURE ABOVE THE PUBES.

To the Editor of the Medical Record.

Sir:—The following case, occurring in the practice of Dr. Snyder, of Shelburne, Nova Scotia, affords, as it seems to me, a valuable contribution to surgery. I give it in nearly his own words:

"J. E., æt. 72, had retention of urine from stricture. A doctor, who was sent for, after many tria's, failed to introduce a catheter. I was called from a distance of twenty-one miles. On my arrival—complete retention having existed for over thirty-six hours—I found him suffering intensely. Having placed him in a hot-water bath, I tried to pass an instrument, but could not, as there were so many false passages. This effort caused so much pain, he begged me to desist and let him die in peace. I told him I could relieve him by an operation, and explained its nature. He at once consented to anything which would afford ease. I then punctured the bladder above the pubes, and took away about three pints of dark muddy looking urine, with immediate relief. Through the canula I passed a gum catheter, and left it for four days, when I removed it, and introduced a silver tube about three inches long—made from a female catheter—with a smooth shilling soldered at three-eighths of an inch from its end. This was kept in place with a long strip of sticking-plaster. After wearing this for ten weeks, at which time the urine was discharged through its natural channel, I removed it. The edges of the puncture were touched with nitrate of silver, and in three days it healed. For eight months he was better, and passed his urine with more ease than he had done for nine years. Eight months subsequently, after wet feet, he took a severe cold, and his former condition returned. After trying to introduce a catheter himself, and making things worse than before, he again sent for me. After fruitless efforts to pass an instrument, he begged me to operate a second time. I did so as before, and removed nearly three pints of healthy urine. The tube was again introduced. In three or four weeks it was removed, when he reported himself well, and at work as usual. I saw him but twice after the last operation, and learned that the wound healed as rapidly as before."

The Doctor adds, "that the above case is one, the like of which he never saw or heard of before."

J. G. Sewall, M.D.

No. 254 West 30th St., New York, Sept. 20, 1872.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 5, 1872, to October 18, 1872, inclusive.

Edwards, L. A., Surgeon.—By S. O. 106, Department of the Lakes, October 12, 1872, assigned to duty at Madison Barracks, New York, as Post Surgeon.

Wirtz, H. R., Surgeon.—By S. O. 132, Department of California, September 30, 1872, assigned to duty at San Francisco, California.

Alexander, R. H., Surgeon.—By S. O. 240, War Department, A. G. O., October 4, 1872, relieved from duty in Department of the East, and to report in person to the Commanding General Department of the Columbia, for assignment to duty.

Forwood, W. H., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., relieved from duty in Department of the Lakes, and to report to the Commanding General Department of Texas, for assignment to duty.—By S. O. 106, Department of the Lakes, October 12, 1872, relieved from duty at Fort Bordy, Mich., and ordered to comply with above order.

Waters, W. E., Assistant Surgeon.—By S. O. 164, Department of the Mo., October 11, 1872, assigned to duty in charge of Post Hospital, Fort Leavenworth, Kansas.

Huntington, D. L., Assistant Surgeon.—By S. O. 248, War Department, A. G. O., October 10, 1872, relieved from duty in Department of the East, and to report in person to the Commanding General Department of the Columbia, for assignment to duty.

De Graw, C. S., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., relieved from duty in Department of the Lakes, and to report in person to the Commanding General Department of Texas, for assignment to duty.

Coues, Elliot, Assistant Surgeon.—By S. O. 198, Department of Dakota, October 19, 1872, assigned to duty as Post Surgeon at Fort Randall, D. T.

Phillips, H. J., Assistant Surgeon.—By S. O. 124, Department of the Columbia, September 27, 1872, to report to the attending Surgeon, Portland, Oregon, for medical treatment.

Lippincott, H., Assistant Surgeon.—By S. O. 244, War Department, A. G. O., October 7, 1872, granted leave of absence for six months, with permission to go beyond the sea.

Monroe, F. La B., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., to report in person to the Commanding General Department of the South, for assignment to duty.

Girard, A. C., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., relieved from duty in Department of Texas, to proceed to New York City, and report by letter, on arrival there, to the Surgeon-General.

Yeomans, A. A., Assistant Surgeon.—By S. O. 194, Department of the East, October 7, 1872, assigned to duty as Post Surgeon at Fort Sullivan, Me.

Moffatt, P., Assistant Surgeon.—By S. O. 162, Department of the Mo., October 5, 1872, assigned to duty at Fort Leavenworth, Kansas.

Styer, Chas., Assistant Surgeon.—By S. O. 340, C. S., War Department, A. G. O., relieved from duty in the Department of the Missouri, to proceed to Philadelphia, Pa., and, on arrival, report by letter to the Surgeon-General.

Corson, J. K., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., relieved from duty in Department of the Platte, to proceed to Philadelphia, Pa., and, on arrival there, report by letter to the Surgeon-General.

Weisel, D., Assistant Surgeon.—By S. O. 240, C. S., War Department, A. G. O., relieved from duty in Department of Texas, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon-General.

Reynolds, Frank, Assistant Surgeon.—By S. O. 238, War Department, A. G. O., October 3, 1872, relieved from duty in the Department of the Columbia, to proceed to New York City, and, on arrival there, report by letter to the Surgeon-General.

Medical Items and News.

The Epidemic of Influenza among Horses.—The *New York Tribune* contains a letter, dated the 21st inst., from a correspondent in Rochester, giving an account of the epidemic which is now raging with great fervor among all the stables in Western New York. It is a form of influenza, and is classed by veterinary authorities under three heads—viz., the catarrhal, rheumatic, and the gastro-erysipelatous forms. The disease, which has made such havoc in the stables of Buffalo, and Niagara, is of a catarrhal character, its first noticeable symptoms being a flow of tears from the eyes, a watery discharge from the nose, general languor, followed by a cough.

In the early stages of the disease the membranes of the nose are pale, of a leaden color, while the eyes present a reddish appearance. The veterinaries also report some cases which, wherever they appear, prove fatal, as commencing with a chill, succeeded by a general feverish condition, manifested by heat of the mouth, membranes of the eyes and nose reddened, pulse frequent, though soft and easily compressed, respiration quickened and sometimes laborious. At this stage the bowels may be sluggish, urinary organs inactive, and the discharge from the nose often assuming a yellowish or greenish appearance. The disease, which has frequently appeared among horses in Europe, usually runs its course within ten days. There has been great devastation among the horses in Rochester and in Buffalo. Owing to improper treatment and an imperfect knowledge of the disease, over three hundred cases have proved fatal in the past twenty-four hours in this city and vicinity.

All the horses owned by the street railway companies are afflicted. O'Brien's Circus Company have 200 horses under treatment. It is safe to estimate that over three-fourths of the horses in Rochester are affected with it, both in the public and private stables. At the date of the letter it was impossible to hire a horse of any kind.

A steam bath has been put in operation, and it is claimed with good effect. Curiously enough canal horses are not suffering, at least there are no cases in the barns.

The disease first made it appearance on this side of the river on Friday, Oct. 11, at Niagara Falls.

The *Rochester Democrat* contains the following letter of 19th inst. from a veterinary surgeon:—

"The Canadian horse disease first showed itself here to any extent on Friday last. It soon attacked nearly every animal in the livery and horse-car stables, and yesterday we were assured that over five hundred animals were suffering from it. One veterinary surgeon alone is treating seventy cases.

"The disease has prevailed in the Dominion for some time past. According to the Buffalo papers it was brought across the Niagara River by the horses of a gentleman who drove over to Queenstown to attend a reception given by the Governor-General. Soon after his return one of his horses was attacked by the epidemic, which in a day or two affected his whole stud. The disease has spread so generally since, that from one-third to one-half of all the horses in Buffalo have suffered from it. We see, from the Lockport *Journal*, that the disease has within a day or two become prevalent there.

"I think it cannot be properly regarded as a new disease. It is clearly a form of influenza that has occurred frequently in the United States, as it often has in different portions of Europe. Three forms of influenza are spoken of by veterinary authors: the catarrhal, rheumatic, and the gastro-erysipelatous form.

"The patient should be excused from all labor and allowed complete rest. The stables should be cleanly, and well ventilated. Disinfectants may be useful and in some stables necessary. Any of the following will answer:—Carbolic acid, sulphate of iron, or bromo-chloralum. The patient should be properly groomed, and the nose and eyes frequently sponged with water, and the limbs, if cold, bandaged. The drink should have the chill slightly removed, but not enough to make it warm and unpalatable. The diet should be light and of a laxative nature; say spout feed or bran, wetted or scalded, with a little salt added. Hay in limited quantities may be allowed.

"In regard to remedies I wish to say that heroic treatment should not be tolerated. Blood-letting, cathartic nauseants, and arterial sedatives are all of them either injurious or uncalled for. Next, whatever medicines are administered should not be given in the form of draughts or drenches, as the animal is sure to be thrown into a paroxysm of coughing the moment a drench is attempted, and some of the medicine will, in such event, be almost sure to find its way into the windpipe and bronchial tubes, thus inducing fatal bronchitis or pneumonia. Balls should not be given, as they will be coughed back or out, and the irritability of the throat will be increased in attempting to pass them over with the hand or fingers. Powders are well-nigh useless, as when mixed with the food the patient will usually refuse both food and powders. Electuaries, sirups, or pastes are the only forms in which medicines may be safely and successfully administered in cases where the throat is tender and irritable, and coughing easily induced.

"Saline medicines I regard as the most useful in this disease. Any of the following will answer:—Chlorate of potash, muriate of ammonia, or hyposulphate of soda. As an anodyne to relieve the cough, fluid extract of belladonna may be added. The proper dose of either of these medicines may be rubbed up with two or three ounces of honey or molasses, and these poured in the mouth from a small bottle or placed on the tongue with a spoon. Given in this way the medicines will be readily lapped up and easily swallowed. But little trouble is required to give it, and no danger of getting any medicine in the trachea will be incurred by this method. About the throat and over the windpipe, a sharp stimulating liniment should be well rubbed in. In cases that prove severe, or are complicated with other and more serious diseases, a competent veterinarian should be employed.

New York Medico-Legal Society.—This Society held its fifth anniversary meeting, October 10, 1872, and the following officers were elected for the ensuing year: *President*, Clark Bell, Esq.; *First Vice-President*, John C. Peters, M.D.; *Second Vice-President*, Arthur J. Delaney, Esq.; *Recording Secretary*, James Ross, M.D.; *Assistant Recording Secretary*, William B. Wallace, Esq.; *Corresponding Secretary*, Jean F. Chauveau, M.D.; *Chemist*, Augustus Wohlfarth, M.D.; *Treasurer*, Thomas S. Bahan, M.D.; *Librarian*, William Shrady, Esq.; *Pathologist and Curator*, Philip E. Donlin, M.D.; *Trustees*, O. C. Warfield, Esq., T. C. Finnell, M.D., J. F. Miller, Esq., H. L. Richardson, M.D., Stephen Rogers, M.D.

Medical Registers.—The system of medical registration, first adopted ten years ago in New York City, is becoming popular in this country. "Medical Registers and Directories" are to be issued in the cities of Boston and Chicago.

Sasoumi Satoo.—A young Japanese, Sasoumi Satoo, son of the chief physician of the Mikado, arrived in Berlin, in November, 1869, to study medicine; he did not know a word of German at the time, but he learned it in five months, and Latin in six. He recently passed in a brilliant manner his third examination for the doctor's degree.

Opening of the Medical Colleges.—The winter course of lectures of the Medical Department of the University of the City of New York was opened September 30th, 1872, by an introductory lecture by Prof. Henry Draper, M.D.; Subject, "Medical Delusions, Charms, Exorcism, Astrology, and Mesmerism."

The opening exercises of the College of Physicians and Surgeons were held October 1st, 1872, in the College Hall. Prof. Charles F. Chandler, Ph.D., delivered the introductory address.

Professor Stober, of Strasburg, an expert oculist, is dead.

American Medical Association.—The Philadelphia *Medical Times*, of September 2d and 16th, 1872, has timely editorials on the "Reorganization of the American Medical Association," based on the remarks made in the Boston *Medical and Surgical Journal*, of July 25th, and the suggestions of our own journal. It is to be hoped that the ball will be kept moving, until an overturn is made in its management.

Russian Quarantine.—From the report of M. De Valcourt, the quarantine of inward-bound ships in the port of Odessa, where cholera has lately prevailed, is practically abandoned, it being found essentially useless. While there are, on the average, but thirty passengers who disembark at that port, subject, if need be, to the rules of quarantine, at least four hundred arrive by rail, free to enter the city without any hindrance. He remarks, in conclusion, "that the rapidity of intercommunication and the large number of travellers render the isolation of centres of infection in Europe impossible. The quarantine system has seen its day; and it is now only urgent to insist, but that with redoubled vigilance, upon the adoption of hygienic measures in all centres of population."

The Mother of Twenty-two Children.—Mrs. Peter Charron, of Ware, Mass. (*Boston Med. and Surg. Jour.*, Sept. 26, 1872), died recently, after twenty-six years of married life, during which time she had twenty two children, all at single births.

Albany Hospital.—By the will of the late William H. DeWitt, the Albany Hospital receives ten thousand dollars.

Worcester City Hospital, Mass.—This new Hospital will have a front of 296 feet, arranged with a centre building 60 by 62 feet, with a tower fourteen feet high, and wings 60 by 152 feet, with towers eighty feet high, the whole costing $300,000.

New York Medical Library and Journal Association.—The Friday evening reunions of this organization have commenced, in the new room No. 107 East Twenty-eighth street. Dr. R. W. Taylor read a paper, October 4, on the "Prophylaxis and Treatment of Chancroidal Phymosis." October 11th, Dr. E. Holden made some remarks on the "Sphygmograph, with Demonstrations." Dr. J. Marion Sims remarked on "Ovariotomy," October 18th. October 25th, Dr. W. B. Neftel discussed "Some of the Recent Discoveries in Pathology, with Demonstrations."

Tyndall.—The English scientist, Prof. Tyndall, with two assistants, arrived in this country in the steamship *Russia*, October 9th. He will deliver a series of lectures before the various lyceums during the coming winter. Four prominent English lecturers—Froude, Geo. MacDonald, Edmund Yates, and Prof. Tyndall—are in our midst.

University of Pennsylvania.—The new building of the University of Pennsylvania, in West Philadelphia, was formally opened October 11th.

Presbyterian Hospital, New York.—The dedicatory services on the opening of this beautiful Hospital were held October 10th, in the Hospital chapel, on Seventieth street and Madison avenue. Rev. J. N. McLeod, D.D., opened the exercises with reading of the Scriptures and prayer. James Lenox, Esq., President, announced that the institution would be open October 11th, for the reception of patients of every country, every creed, and every tongue. Rev. W. M. Paxton, D.D., paid a glowing tribute to the principal originator and great benefactor of the Hospital—James Lenox, Esq.; also to the numerous and generous friends and contributors; and congratulated the general public that another such important Hospital had been erected in their midst. Willard Parker, M.D., followed with a lengthy address. Rev. William Adams, D.D., made the closing remarks, and referred to the fact that an endowment of $250,000 was needed to carry on the Hospital, and suggested that generous donations would be timely, in addition to the $50,000 already subscribed. While closing, a slip of paper was handed him announcing that Mr. Lenox would give $125,000 towards the endowment fund, provided an equal amount was raised by others. After the benediction, the large audience then surveyed the wards and numerous rooms connected with the establishment, which are furnished with the latest appliances and improvements.

University of Munich.—Dr. Francis Dowling writes from Munich, to the *Clinic*, that the four hundredth anniversary of this University was celebrated with pomp recently. Delegations were present from all the Universities in Germany and Austria, also from Oxford, England. The corps of medical Professors will compare favorably with any in Germany. Profs. Pettenkofer, Siebold, Bischoff, Nussbaum and Liebig lecture there. The hospital is old and badly ventilated, in consequence of which about *one-sixth* of the cases operated upon in the institution die of pyæmia. The clinics are poorly arranged, although there is plenty of material.

A New Parisian Medical Journal.—M. Prof. Verrier is the editor of a new obstetrical journal, issued in Paris, called *La Gazette Obstetricale de Paris.*

Medical College of Ohio, Cincinnati.—The College museum has just received a valuable acquisition in the shape of the artistically prepared skeleton of "Old Man Dead," the College Resurrectionist for the past forty years. The skeleton is seated on a tombstone, with spade in hand and pipe in mouth, in perfect self-complacency, apparently over a recent successful "job."

Virginia State Board of Health.—The following Professors are the medical officers of this new State Board of Health: J. L. Cabell, M.D., *President;* and L. S. Joynes, M.D., *Permanent Secretary.*

Milk.—It was stated at the recent meeting of the Farmers' Pure Milk Association, held at Christian Association Hall, that out of 500 samples examined by Professor Chandler, 470 were adulterated.

Dartmouth College.—The late Benjamin D. Emerson, of Jamaica Plain, Mass., one of the authors of "Emerson's Arithmetic," left one hundred thousand dollars to his Alma Mater—Dartmouth College, N. H.

College of Physicians and Surgeons, N. Y.—To correct a statement circulating in the medical journals, that Prof. T. G. Thomas has resigned his chair of Obstetrics, etc., in this college, the Secretary of the Faculty writes that Dr. Thomas lectures both "didactically and clinically in the college." The false report probably grew out of the fact that Prof. James W. McLane, who was Professor of Materia Medica and Therapeutics, was recently elected *Adjunct* Professor of Obstetrics and the Diseases of Women and Children.

New York Academy of Medicine.—The Transactions of the Academy, New Series, Vol. I., Part II., is now out. It contains the "Report of Obstetric Section," papers on "Solar Spectroscopy as Applied to Medicine," and "Vital Statistics," by Drs. S. Waterman, Albert H. Gallatin, and Chas. P. Russel.

The Comic Law of Intemperance.—This is the title of a contribution to the Scientific Study of the Temperance Question, by George M. Beard, M.D., in which he holds that the following methods should be employed in attacking the evil of intemperance: 1st. Education, literary, technical, scientific, moral, and religious. 2d. Diffusion of material comforts. 3d. Popularization of pure wines and mild beers. 4th. Restriction of the sale of strong and adulterated liquors. He considers the *first* mentioned as not only more important than all the others, but really worth more than all the others combined.

Wistar.—Dr. Mifflin Wistar, son of the late Professor Wistar, died in Philadelphia, Pa., August 15th, 1872, aged 62 years.

New Publications.

Evolution of Life. By Henry C. Chapman, M.D., Member of Academy Natural Sciences, Philadelphia. Philadelphia: Lippincott & Co., 1872.

Transactions of the American Medical Association, Instituted 1847, Vol. XXIII. Philadelphia: 1872.

Hand-Book of Compound Medicines; or the Prescribers' and Dispensers' Vade-mecum. By Arnold J. Cooley, Author of Cyclopædia of Receipts, etc. Philadelphia: J. B. Lippincott & Co., 1872.

Original Communications.

ON FOUNDLINGS AND FOUNDLING INSTITUTIONS.

A REPORT READ BEFORE THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, FEB. 7TH, 1872.*

By ABRAHAM JACOBI, M.D.,

CHAIRMAN OF THE COMMITTEE.

The Medical Society of the State of New York, having passed in its meeting of Feb. 6th, 1871, the following preamble and resolutions:

Whereas, Humanity acknowledges the claims of every human being to life and to some degree of prosperity, and recognizes in every civilized country the right of every new-born to be protected and supported; and

Whereas, Political economy requires the saving of a being which has given rise to outlay until and after it can become useful and repay the expenses incurred in its full development; and

Whereas, The moral constitution of society requires that every member of society should obtain a sufficient training of its intellectual and moral powers; and

Whereas, The mortality of infants, being large from natural causes, is three times larger in public institutions destined for the maintaining of infants than in the general infant population; and

Whereas, The Board of Commissioners of Charities and Correction, always willing to be guided by competent advice, and desirous of doing their best, have already had a report prepared for them suggesting changes and improvements in the raising of their infants:

Therefore, Be it resolved by the State Medical Society to appoint a Committee to investigate and report, in the meeting of 1872, upon the following subjects:

1. The causes of the fearful mortality of abandoned infants in general, and those in large public institutions in particular.

2. The reasons for the giving up of large institutions, and the success of the dispersing system for abandoned infants, in every country of Europe, where the preservation of lives was an object.

3. The causes of the unusually large infant mortality in the institutions in charge of either public or self-constituted authorities in New York City and State.

4. The plans and means for improving the condition of foundlings and abandoned children in New York City and State—

a. During their infancy, when they are most subject to disease and death.

b. During childhood and adolescence, when they require an education sufficient to make them useful members, and prevent them from becoming enemies of and dangerous to society.

The President, Dr. S. Oakley Vanderpoel, appointed Dr. Jacobi, New York; Dr. White, Buffalo; Dr. Dean, Rochester; Dr. Thomas Hun, Albany; and Dr. Hutchison, Brooklyn, a Committee to investigate and report on the above-mentioned subjects.

* A large portion of the statements and figures contained in this report have been copied from *Report on the Raising and Education of Abandoned Children in Europe, with Statistics and General Remarks*, by A. Jacobi, M.D., 1870, and "*Inaugural Address*, containing a Paper on Infant Asylums," *N. Y. Med. Journal*, Jan., 1872, by the same author. The former was printed in but a few copies, and is therefore not extensively known.

REPORT.

The greatest improvement of public morals in modern times consists in the acknowledgment of the principle of mutual solidarity; the principle that all beings are endowed with certain inalienable rights, and that amongst these are life, liberty, and happiness; and the further principle, that protection is due to the feeble. Thus it is that modern history has commenced to solve the serious questions of the rights of color, sexes, and ages. If there is any right belonging to the new-born and feeble infant, it is that of security of life and health. Under ordinary circumstances the care of the new-born infant belongs to the parents or their families; but there are a large number of infants who lack the necessary care and protection derived from their belonging to a family circle. A large number belong to parents sick in hospitals or confined in prisons, or to such as have died without leaving any means of sustenance for their offspring; a large number of infants belong to parents or mothers who are not capable of providing for their entire necessities; another number have been abandoned by their legitimate or illegitimate parents or mothers. All of these categories, especially the latter, have a claim on the aid of the community. Provision for their wants ought to be made in the interest, first, of the children who have a right to live; second, of the community who have the natural duties of humanity to perform and its own economical necessities and moral requirements to fulfill. In order to better understand this assertion, we refer to the following facts and considerations:

Of the whole population of the countries of Europe, according to Wappaeus, 33.66 per cent. are below fifteen years of age. Thus one-third of the living are consumers only, while they produce nothing at all. Between fifteen and twenty years, when most individuals are still unproductive, very many still preparing for their vocation or trade, are 9.72 per cent. But 48.88 per cent. are between twenty and sixty years, the period of activity and work. Between sixty and seventy years, a period of life which is almost unproductive, are 4.92 per cent., and beyond that age, where unproductiveness is the rule, there are 2.81 per cent. of the whole population. At all events, nearly one-half of the population are consumers only, before they are able to repay society for the sacrifices the community has to bring in order to raise them and render them productive. Thus a sound political economy requires the continuation of life until and beyond the period of full and unbiassed productivity. Whatever life is thrown away before, is just as much capital thrown away. Therefore both social, moral, and political economy insist upon the protection of the lives of the newly-born and young infant. Humanity requires it, and common prudence commands the saving of a product after it has been called into existence, and has given rise to a waste of working power. Political economy need not be told that a mother who carries a child does less work than in normal circumstances. To waste the product after it has given rise to expense, which is equal to non-production, is a direct injury to national wealth and power. Every new invention in medicine and surgery, the forceps, vaccination, chloroform, have been so many means of increasing the national wealth by saving life.

But this is not the only consideration of importance. The lost life is a dead loss, but the raising of unhealthy children, or vicious ones, amounts to a constant injury to society, a perpetual malignant disease, eating the marrow of the land. If, therefore, any means are resorted to for saving the lives of, and provid-

ing an education for, the abandoned or orphan children, they ought to be sufficient, and amply so. If this duty is neglected, the punishment falling upon a community in particular, society in general, is but just. Neglect of either physical welfare or moral and mental education is equally dangerous.

Insufficient physical development, depending upon incompetent nursing, scanty or injudicious feeding, results in the raising of a class of persons whose presence in society is a dead weight and an eating cancer. Feeble men, crippled women, raised by insufficient measures for the bringing up of children, will require renewed efforts for their support on the part of society as long as they live. Thus capital is wasted on their being born, nursed, and supported. If they had never been conceived and born, it would have been better for society. As they exist, they have a claim on humanity. When they have facilities to work, society has a claim on them and will thrive through them; not otherwise. Thus raising the poor into healthy and robust persons is a direct gain.

If the moral and mental education of the same class of individuals is neglected, there is more than a mere probability of demoralization being the result. Public order is destroyed by such a population, and public means squandered. Means that were saved in the raising and educating of the babies will be required tenfold to sustain houses of correction and State prisons. In 1853 there were, in the bagnios of France, 5,758 persons. Of these 391 had been illegitimate children, and 146 foundlings. In the State prisons, of 18,205 inmates, 880 were illegitimate and 361 foundlings. And the same proportion holds good for all houses of correction. Of 1,300 Frenchmen, one was the subject of legal punishment, and among former foundlings one of 158. Thus, of the foundlings of France, eight times as many get punished by law as the average population.

Thus it appears that the most economical policy consists in raising and educating infants and children into physically and mentally healthy men and women. Money spent on them is easily saved in hospitals and prisons. There is but one excuse for a community for neglecting the obvious duties toward the children and itself, viz., extreme poverty. Therefore, where a special community has but deficient means, the whole people, society in general, ought to hold themselves responsible. Society in general is either benefited by or suffering from their constituent parts, and therefore the care of the individual is a matter of common concern. If there is any meaning in the principle of general solidarity, it includes the right of every individual to a healthy body and a sound education. The equality preached by early Christianity and the doctrines of modern social science agree perfectly on that point, and the shrewdness of political economists has arrived at the same conclusion.

There can be no question about the fact, that as a rule the life and happiness of little children is better protected at the breasts of their mothers, and in the circle of their families, when there is a mother alive and a family to which they belong; therefore it would not be safe for the community to take charge of an infant in every case where the means of either mother or family appear to render the safety of an infant but little doubtful. It is better to aid such mothers or families in the attempt of raising their infants, than to relieve them of the entire responsibility in regard to them, for the dangers attending the removal of an infant from the breast of its own mother are the more considerable the younger the infants. They suffer from being deprived of their normal food; the procuring of a wet-nurse is frequently difficult or impossible; when one is found, she may not be satisfactory; artificial feeding will not be always carefully attended to, and will certainly not always be adapted to every individual case, especially when they are entrusted to attendants amongst the poorer classes; there is less protection from the heat of summer or cold of winter; there is the danger of transportation from one place to another, of individual egotism resulting in insufficiency of care, dressing, and feeding; of the crowding of institutions taking charge of them; and not unfrequently the incompetency of pecuniary means in both large public institutions and private homes. The egotism of private individuals has the same unfortunate result exhibited by undue parsimony in large institutions destined for the reception of the children amongst nations who spend a great deal of their means for other purposes, —military displays, complicated custom-house administration, purchases of barren provinces, or the luxury of royal courts. The fact of the occurrence of a large number of illegitimate births in every community, and especially in large cities, cannot be denied; nor is it possible to conceal the other fact, that a number of children are destroyed before the normal commencement of their independent lives. The provision made for the sustenance of the poor has never proved sufficient to relieve the care and sorrow and annoyance depending upon the very existence of an illegitimate child, or of children born in wedlock to parents in very straitened circumstances. Thus it is that abortion, or premeditated destruction of the born child, or rapid or slow destruction by hunger and exposure, have interfered with the increase of population. Nor is it possible to expect that the mothers of illegitimate children should be either egotistic or resigned enough to call for the necessary support for themselves or their off-prings, or that they should wish to be questioned about a number of particulars they are unwilling to divulge; or that they should willingly undergo want and hardship, for the only purpose of saving the lives of their children. As this is so, provision must be made for the sustenance of those who have been born; or those whose lives ought not to be destroyed before they are capable of continuing an independent existence. By so providing for the means to save and protect the new-born, the fallen, or helpless, the community will obtain two ends: first, to save lives; second, to prevent the demoralization of those who will, under certain circumstances, resort to abortion or infanticide. It is true that in former times in most countries, the facilities of getting rid of the responsibility incurred of giving birth to a new being, have been too great. The very fact of the new-born being received without questions and investigation, has frequently been the cause of the reception of thousands of children born in wedlock, thereby facilitating hasty matrimonial connections, demoralizing the public by the ease with which they could rid themselves of their obligations, and spending improperly the means of the tax-paying community. Still, the very fact that the lives of the children, when not taken care of by the community, had been of sufficient importance to induce every civilized country to make provision for the poor, or uncared for, or abandoned infant or child, no matter whether legitimate or illegitimate, shows an increase of human feeling and moral development.

The institutions by which this end is obtained are of two different kinds: the children have either been entrusted to private parties, who are expected to take the place of the unknown or incompetent parents; or they are given in large numbers in charge of institutions established for the purpose of taking care of hundreds, or even thousands, at one and the same time.

In Europe, two methods of caring for the young

have been amply tried. Some of the large commonwealths have adopted the principle that society is responsible for every individual's life and person. They take charge of those who cannot take care of themselves, consequently they do not inquire after the family or mother or father of those entrusted to their care. In France the inquiry after paternity is forbidden by law. In a decree of the French National Assembly of June 28th, 1793, we read: "The nation binds itself to take care of the physical and moral education of the abandoned children. These children are given the name of orphans. Every other designation is prohibited. Every girl that undertakes to nurse her own child has a claim on national subsidy. Every citizen has a claim on the support, by the nation, of his children, in or ourside of an institution." Most of these principles are still valid in France, Spain, Portugal, Italy, Austria and also in Russia; but the loose manner in which the babies were formerly admitted is partially abrogated. It is a peculiar fact that most of these countries, in fact all except Russia, are prominently Catholic. They are also those in which the necessity of taking care of the abandoned children was first urged, and principally by clergymen. The humanizing influence of the Catholic religion during mediæval periods is proved by nothing better than by such measures as were taken in favor of the helpless and abandoned infants.

The other method of caring for this class of the population has been called the Germanic or the Protestant. Society, or the State, lost the connecting ideal link of the Church. No common tie, no mutual responsibility. In fact, the German princes first embracing Protestantism, did so for the purpose of making themselves independent of the Emperor and enriching themselves by secularizing convents. Thus, while the Catholic princes had usually availed themselves of their secular power in the interest of the Church, the Protestant ones used the Church or religion in the interest of their worldly aggrandizement. They succeeded, and henceforth in the Protestant countries the resources of the community were exhausted in the interest of the master, who bound himself to nothing but the execution of his will, was constrained by no Church, and had by no means a feeling of responsibility for the abandoned infants. The state, that is, its proprietor," by the grace of God," refused to take charge of a baby; the mother was declared responsible, also the father, when known in the village or town; and frequent disputes would arise as to where the infant belonged, and only when the responsibility could not be localized, the commonwealth at large felt the least obligation. Even when, in modern times, absolutism was broken, the measures for the relief of infants remained almost the same. The claims of every human being to be raised and educated in a humane manner is acknowledged and recognized in such commonwealths only in which the importance of the individual is sufficiently understood, and the policy of the community is that of justice, equality, and liberty. Thus a republican society only, unbiassed by the self-willed egotism of one individual sovereign, will feel bound to save and rear the new-born, the feeble, the dependent, to his or her utmost capability. Whatever was obtained by the Church in Catholic countries, said Church being desirous to do all they could for the eternal kingdom, the glory of God, and its own power, this, and much more, is done by a republican community, in its own interests, and on the bidding of its own conscience. Thus we find even the community of Hamburg, although strongly Protestant and under the influence of the North German governments, more liberal towards the poor new-born than any of the neighboring communities. The example of Switzerland appears contradictory. Although a confederation of republics, it still adheres to the narrow-minded principle not to relieve the illegitimate infants, for the alleged purpose of discouraging illicit intercourse.

The reason is to be found in the fact that Switzerland is not a republic, in the best sense of the term, but a congregate of 22 little communities with partially republican institutions, said communities living in almost constant jealousy and envy, hindering each other as much as possible, hating each others' institutions, usages, and religion. It is not much longer than twenty years that the separate dwarf republics were fighting each other on account of religious discrepancies.

We are in possession of official lists and tables concerning the poor children of Hamburg, which we owe, as they have not been printed, to the kindness of Senator Peterson and Dr. Meyer. They will show the method followed out in the care and distribution of infants and children left in public charge, either foundlings or orphans, or illegitimate infants whose mothers are not able to support their offspring, or children of criminals, &c., or of such infants as are given up to the city authorities by their mothers. For every mother has a claim on the city to have her child taken care of. These statistics show that the care of the foundlings does not form a special department, but part of the general provisions in the interest of the poor. Illegitimate children especially are not recognized as facts. It is a peculiarity of the Protestant Northern Germany, that the fact of illegitimate births is hardly recognized. In Prussia this tendency to self-congratulation is so strong, that no public houses of prostitution are allowed to exist, not even in the largest cities and under the supervision of the police. How this little fact is able to improve public morals and official honesty is sufficiently proved by the lists of public girls kept under a sort of superintendence by the police, in the hands of the local authorities. I have been permitted to see them, being told at the same time that they were not official, not authorized, inasmuch as an illustrious elderly lady, connected with the royal family, was probably averse to admitting the existence of illicit intercourse in Prussia. It is but just to concede to the Catholic countries the praise of greater honesty and more practical statesmanship.

The number of farmed-out children of Hamburg under six months was:—

1861....80	Of whom died under six months,		18
1862....90	"	"	20
1863....72	"	"	14
1864....80	"	"	20
1865....82	"	"	25
1866....84	"	"	29
1867....90	"	"	22
1868....92	"	"	33
Total....670		Total....	181

The general principle of North Germany holds good for Hanover, both province and city. The mother and father, and, if necessary, the township they or she come from, are responsible for the care of the child. Thus of all the illegitimate children born in the city of Hanover, but few belong to the city, and have a claim upon the care of the city authorities. And of the few hundred infants or children in charge of the city, but a small percentage are illegitimate. Further: of 192 children taken in charge in 1868, but 66 were under a year. Thus the statistical importance of these figures is but very trifling. The smaller the number of nurslings to be disposed of, the easier the task. They are farmed out, the babies if possible sent to a nursing

woman, and usually to the country. The results are, in this part of the country, for the few infants concerned, almost as favorable as for those born in wedlock and raised by their parents. But those who are in charge of their mothers, and are farmed out by them to be brought up by hand, fared very badly. The same industry of killing infants systematically, is also known to exist. The police, as our official informant told us, had taken pains to ascertain the places in which a large number of such infants perished.

At Berlin, Prussia, the number of new-born infants abandoned and found is very small, seldom exceeding ten a year. In consequence of the strict law compelling mother, father, village, town, or district to take charge of their own legitimate or illegitimate infants, but very few in proportion, are under the care of the community at large. Thus it is, that the mortality of the illegitimate infants left under the care of their mothers is reported as frightful. There is a sort of superintendence, or rather an attempt at knowing the result of such care; but very little is officially known concerning the exact conditions and mortality of these "Haltekinder," as those infants who are given out by their own mothers are called. Those who are in charge of the city fare better; especially since the rearing of the infants in institutions has been given up. The "orphan asylum" in Strahlau street is used at present, as a depot, in which rarely more than a few dozen infants and children can be found simultaneously. The infants are farmed out in the city (1,500), or in the country (500), at some distance, some a hundred miles from the city. After they have passed the time in which the mortality is necessarily large, they are admitted into the "orphan asylum" at Rummelsburg, one of the suburbs, where about 500 children are kept until they are 14 or 15 years old. At that age the boys are apprenticed out, the girls remain another year in the institution and are taught housework before they are provided with places in private families. A certain superintendence is still kept up. Especially the girls appear to have been well watched. It is known that of 62 girls discharged from Rummelsburg from 1860 to 1863, three became prostitutes in after years, 5.8 per cent.; and of 136 discharged from 1864 to 1867, 6, viz., 4.40 per cent. There are, besides, private institutions containing a larger total of children (800, not infants) than Rummelsburg, with the same object and similar results. A peculiar feature of the raising of the Berlin infants is the combination of official and private superintendence. A large number of benevolent persons about the city, mostly of the best and most educated classes, have placed themselves at the disposal of the authorities for the purpose of watching the farmed-out infants. The whole city is divided into a number of "orphan districts," each containing a number of names of superintendents. Every person is entrusted with the superintendence of a few, usually not more than three "orphans." These private persons are thus clad with a sort of official authority, and the whole plan is said to work admirably. The attempt recently made by Mrs. Morgenstern, one of the best known and most active ladies of the city of Berlin, at raising infants in an institution, appears to work badly. We have seen her institution in the Belle Alliance Str. During its first three months in 1869 it had admitted 29 infants. Nine had died, and a few more were almost moribund at the date of our visit. They were all bottle-fed in a healthy part of the city, in a large garden. It was summer, and the infants were out of doors a great deal. What the mortality must necessarily be in winter-time can easily be concluded. Still, the results of this institution, if still in operation, are not known to our Committee.

The following are the instructions to the mothers of such children as are fit objects to receive "the advantages of the *London Foundling Hospital*." The committee of Governors meet every Saturday morning at 10 o'clock, at the foundling hospital, to receive and deliberate on petitions praying for the admission of children. Children can only be received upon personal application of the mothers. Petitions must set forth the true state of the mother's case, for if any deception is used the petition will be rejected, and the child will not be received into the hospital. No application can be received previous to the births nor after the child is twelve months old. No child can be admitted unless the committee is satisfied, after due inquiry, of the *previous good* character and present necessity of the mother, and that the father of the child has deserted it and the mother; and also, that the reception of the child will, in all probability, be the means of replacing the mother in the course of virtue, and the paths of an honest livelihood. Persons who present petitions to the committee, must not apply to any governor, or to any officer or servant belonging to the hospital on the subject on any pretence whatever; but they themselves must attend at 9 o'clock on Saturday morning at the hospital with their petitions. All of which will be considered in rotation whilst the petitioners are expected to remain in attendance. No money is received for the admission of children, nor any fee or perquisite allowed to be taken by any officer of the hospital, on pain of dismissal; and indeed, any person who shall be known to offer the same will subject her petition to rejection —the officers and servants of the hospital having been instructed to acquaint the committee whenever such offer is made. The children of married women and widows are not admissible into this hospital. The petition is to be written out on the following plan: 1. Name of petitioner. 2. Place of residence. 3. Petitioner's age. 4 and 5. Day and month on which the child was born. 6. Male or female. 7. Father's name. 8. His trade or occupation. 9. Place of residence when first acquainted with petitioner. 10 and 11. When the mother last saw him (day and month). 12. What is become of him.

A few days after their admission, the infants are sent to the country, where they remain until their fifth year. The wet-nurses receive an extra gratification when the child, after a year, is in good health. The death-rate in the first year is said to be 20 per cent. Having attained their fifth year, they are returned to the institution in Guildford street, where they are taught reading, writing, arithmetic and the English high Church catechism. The girls are placed out, at the age of fifteen or thereabouts, as domestic servants. They are apprenticed to the parties taking them until they are twenty years of age. An outfit of clothes, of the estimated value of five pounds is given with them, but afterwards they are provided with everything, in sickness and in health, by the persons to whom they are apprenticed. These parties must be of the Protestant religion, and housekeepers, keep two servants (including the apprentice), and not let lodgings, and give two references as to responsibility. All applications must be made to the matron, at the hospital, on Tuesdays and Thursdays, between the hours of ten and two o'clock; and in case the parties are married, they must both attend to see the girl before the formal application is made to the committee. The girls are not placed with persons living a considerable distance from London, nor with single gentlemen. Indentures can only be cancelled by the mutual consent of both parties; but, from whatever cause the apprenticeship may terminate, clothing to the above value must be returned with the girl. The boys are

placed out, at the age of fourteen, generally as mechanics. They are apprenticed to the parties taking them until they are twenty-one years old. A premium of ten pounds, one-half payable on the execution of the indenture, and the other at the end of the first year, and an outfit of clothes, of the estimated value of five pounds, are given with them. During their apprenticeship they are to be provided with everything, in sickness and in health, by the persons to whom they are apprenticed. These parties must be of the Protestant religion, and housekeepers, and give two references as to their responsibility. All applications to be made to Mr. Twiddy, at the hospital, on "Thursdays and Fridays, between the hours of three and five o'clock."

The whole doings of the "Foundling Hospital" of Guildford street is summed up, for one year, in the following figures:

Children remaining 31st Dec., 1867	463
" received in 1868	63
	526
Imbecile, deformed, or invalid adults, etc., supported by the hospital, 31st Dec., 1867	15
Under training at the Home and Colonial School Society	1
	542
Children apprenticed or placed out in 1868	30
" restored to their parents	2
" died in the country	14
" remaining in the hospital on Dec. 31st, 1868	295
" at nurse in the country	185
	526
Imbecile, deformed, or invalid adults maintained by the hospital, on Dec. 31st, 1868	12
At the Training College at Brighton	1
Removed from the list of invalids, and supported out of the Benevolent Fund	3
	542

At the termination of the apprenticeship the institution considers its mission as ended. If the children have gone through it with credit, they are to receive a premium of five pounds, a prayer-book, and the order of once a year to say a prayer of thanks in the chapel of the institution. Sickly and feeble ones, who are unfit to learn a trade or business, are supported by the hospital funds, and are employed as servants in the hospital.

Reclamations are but very rarely allowed. As soon as the infant is admitted, and before it is sent to the country, it receives, at being baptized, a name different from that on which it was received. Henceforth the mothers are permitted to inquire after their offspring every Monday, but they do not know the names they have in the institution; only their number being known. The children are rarely returned to their relatives. The cases in which inmates of the institution, or former inmates, are made acquainted with their true names, are but few indeed.

Such is the institution as it exists and is at present managed, in Guildford street. It is meant to exclude the infants, not to receive and raise them. Noble Captain Thomas Coram would not recognize his own institution, if he came to life again. The fact that after Parliament had, in 1754, donated a yearly sum of ten thousand pounds, and admitted every child offered, all at once, in four years, fifteen thousand little ones were delivered, and ten thousand died, a fact which is easily explained by the incomplete arrangements for the sudden increase in numbers, has been the cause why British conscience prefers, up to this day, to let them die out of sight. As long as the grounds of the "Foundling Hospital" in Guildford street look well kept, as long as the Sunday service in the large Hall of the house is crowded by a self-complacent audience of the well-dressed better class and aristocracy of London, and the silver plates of the door-keepers are filled to their utmost capacity with the contributions every visitor is expected and urged to give, it appears to be fully satisfied. The crowds of ladies and gentlemen thronging around tables at which a few hundred English children are taking their public Sunday dinner, appear to go there for the purpose of complimenting themselves and each other at the bountiful manner in which Old England takes care of her indigent and young. The numberless who are not admitted, or kept out by hard and inhuman rules, are not taken into consideration. Moreover, even those who are sustained in the institution, do not fare very well. The philanthropic visitor who goes on Sunday to see the institution, attend the service, and watch the public feeding, like the proceedings in a Zoological Garden, involuntarily comes to the conclusion that the children are retained there for nothing but the show of philanthropy, for no other education but Sunday choir-singing and—withering. The girls are never, until their final discharge, permitted to leave the walls and grounds of the institution. The boys twice a year. Thus it is that, according to the careful report of a special commissioner, Mr. Wrottesley, but very few attain a medium height.

The cruelty and hypocrisy of a legislation like this of London on the admission or raising of infants is best shown by their results. Mothers know that if they "drop" children, they are harshly punished, without the chance of benefiting their offspring. Thus "child-dropping" of living children is but rare in London. The records of the Metropolitan Police District of London, which have been kindly placed at my service by the authorities, exhibit the following small numbers for the larger portion of the millions called London: In 1864, 23 living children were found abandoned; in 1865, 22; in 1866, 30; in 1867, 39; in 1868, 35; in 1869. (Jan. March) 9.

The explanation for these small numbers is exhibited by the following figures. There were found dead (murdered) infants in the streets of the same district: 225 in 1864; 169 in 1865; 237 in 1866; 173 in 1867; 170 in 1868; 26 in 1869 (Jan.—March). These figures do not prove a great success in encouraging morality amongst English society, which is the outspoken object of the laws in reference to the rearing of the poor young. Great Britain appears to have more infants than they mean to be embarrassed by; and Guildford Street Foundling Hospital is the proof of their anxiety for the indigent young and their own respectability.

Fortunately a correct appreciation of the necessities of infancy and childhood are understood better in a large portion of Great Britain than in the metropolis. A large number of reports on the "boarding-out system" yield a convincing evidence of its appropriateness and success. We take a pleasure in crediting much, or most, of our knowledge on the realization of the boarding-out system, as far as Great Britain is concerned, to Florence Hill, *Children of the State, The Training of Juvenile Paupers*—London: Macmillan & Co. 1868; and William Anderson, *Children Rescued from Pauperism; or, The Boarding-out System in Scotland*—Edinburgh: John Menzies & Co. 1871.

In 1828—according to Florence Hill, p. 118—was

originated in Dublin, by three Protestants of very humble position, an orphanage for the fatherless of their own faith. Until that period such bereaved little ones had frequently found a refuge in the numerous institutions established by benevolent Roman Catholics; but in these, not unnaturally, conversion to the creed of their benefactors became, if not absolutely a condition, generally a consequence of the children's admittance; and to provide for their education in the religion of their parents, the Protestant Orphan Society was founded. A *penny-a-week* subscription was set on foot by the suggesters of the scheme (in Ireland a common, and, as it appears to us, a touching mode of raising funds for charitable purposes, including, as it does, the offerings of the lowliest), and with the humble sum of threepence they commenced in November, 1828, their operations. Difficulties, at first appearing almost insuperable, were by energy and perseverance surmounted; money flowed in apace, and the Archbishop of Dublin became the Patron of the Society, while the Provost of Trinity College and the Dean of St. Patrick's accepted the office of vice-presidents. Twenty-four destitute orphans were selected as the first recipients of its bounty, and a plan was adopted for training its wards, which has ever since been pursued. No vast and imposing building was erected, swallowing up the funds of the institution, and agglomerating the children in unnatural masses; but the orphans were sent into the country to board in the families of respectable Protestants, usually laborers or small farmers, the moral or religious character of the foster-mothers being duly ascertained.

The children were also taken under the voluntary supervision of the Protestant clergymen of the district in which they are located, with whom the Committee of the Society constantly correspond concerning their welfare, and through whom all payments to nurses are made; and to these three safeguards—the respectability of the foster-parents, the uncertain visits of inspectors, and the constant friendly surveillance of a resident clergyman—were soon added yearly, and, if occasion required, still more frequent visits by three members of the Committee.

The sums paid by the Society to the nurses were originally £4 per annum for children under two years old, and £3 10s. for all above that age. These were to cover the expense of food, lodging, washing, and education,—the Society providing clothing. Subsequently these amounts were raised to £5 for children under *one* year old, and £4 for all above; the society paying 5s. per annum to a neighboring school for each child able to attend.

A considerable number of the subscribers had desired, when the association was formed, that a house should be taken as a dwelling for the orphans; and consequently a very careful investigation was made into the relative merits of the two schemes. The inquiry resulted in the conviction *that the cost of the children maintained in a house apart would be three times that of their support in families;* while the moral advantage of replacing them as nearly as possible in the circumstances appointed by nature—where, in the circle of an industrious family, they would be trained by example as well as precept in habits of activity and labor—was believed to afford an equally strong motive for adopting the boarding-out system.

There appears to be a growing feeling against Orphanages at home and abroad. "Une grande question a été mise à l'ordre du jour d'une importante assemblée, qui doit se tenir dans le courant de cette année en Hollande, 'Le peu de succès qu' obtiennent les orphelinats,'"—writes Monsieur John Bost in his last Annual Report of his marvellous institution at La Force in France, where orphans form one of the many classes of the bereaved and the afflicted whom he takes under his benevolent care, and teaches to be mutually helpful.* He argues, however, that unless every orphan can find a home in a family—orphanages are "*une déplorable nécessité;*" but he urges in eloquent and touching language the importance of rendering life in such institutions as little distinct as possible from that of the outer world, and shows how this is accomplished at Laforce.

A burial-place† for those of the orphans who may die in Dublin was granted, unsolicited, by the incumbent of St. Catherine's. The spot he gave is close to that where, having just laid the body of a friend in its last resting-place, and deeply moved by the destitute condition of his children, three humble tradesmen devised the Protestant Orphan Society. A suitable inscription on the tombstone placed in memory of the orphans first buried there, records the origin of the Association. It has indeed become a mighty tree from so small a seed! The provincial branches, as we learn from the annual report issued in March, 1866, have increased to thirty; they have 2,208 orphans under their care, and have placed out in the world 5,376. 1,817 orphans have shared the bounty of the parent society, of whom 453 children are now under its charge; 831 have been apprenticed; and 428 have been returned to friends whose circumstances had sufficiently improved to authorize the restoration.

The mortality of the Dublin orphans, calculated in 1862 upon several preceding years, is, according to the eminent statician Dr. Neilson Hancock, slightly under 1 per cent. per annum, the average national rate for their age being about 1½ per cent.‡ Let us contrast this with the deaths for the same period throughout Ireland in workhouses, which, for children under sixteen, was about three times the national rate, while in Cork Workhouse this was multiplied ten times; and in North Dublin Union the mortality of children under two years amounted to 116 per cent. "In other words, children under two years of age were not likely to live more than ten months in the house.'§ No wonder the guardians of that Union urged the non-admission of such children, "as it would be nearly certain death to receive them."‖

About nine years ago¶ a similar orphanage, called St. Brigid's, was established by a Roman Catholic lady in Dublin, with the warm approval of the Roman Catholic Archbishop, for children of that faith. Placed to board in respectable country families, they are constantly visited by the conductors of the Orphanage, and watched over by the priest of the parish in which they dwell; and at a suitable age they are apprenticed to trades or service. Within seven years of the commencement 500 children had been taken in charge, of whom only three or four had turned out ill, while 200 were "already working for themselves at trades, at service, or growing up in the families and as the sons or daughters of the foster parents."

The systematic attempts at realizing the boarding-out system made in England are but few. The results, however, of those trials which have been made by Mrs. Archer, of Swindon (Florence Hill, p. 176), Mr. Armistead, of Cheshire (p. 184), Miss Boucherett, of Lincolnshire (p. 190), by the Guardians of Leominster

* *Les Œuvres de Laforce.* London: Nisbet & Co. 1867.
† Florence Hill, p. 131.
‡ The Mortality of Children in Workhouses in Ireland. By W. Neilson Hancock, Esq., LL.D. Dublin. 1862.
§ Ibid. ‖ Ibid.
¶ 1859. Florence Hill, p 135.

Union, and by the Guardians of Eton Union (p. 206), are very encouraging indeed.

The very best and most exclusive results, however, have been obtained in Scotland.

In 1861, the *Workhouse Visiting Journal* printed an abstract of answers to questions submitted by it to Mr. Greig, clerk to the Edinburgh Parochial Board, upon the system adopted by that body in respect to the orphan children under their care; and the document has been since reprinted in various publications. We are enabled,* by his courtesy, to give the following fuller information, brought down to the end of 1866:—

"*Report by George Greig, Inspector of Poor for the City Parish of Edinburgh, as to the mode of dealing with Orphan Children in that Parish.* 1866.

"The pauper children of this parish were formerly maintained in an institution called the Orphan Hospital, apart from the poorhouse, but so dissatisfied was this Board with the results, that, about eighteen years ago they resolved to board the children with families in the country, where they might have the physical advantage of the country air, as well as the moral one of being separated from bad associates, and brought into contact with people of good character. This plan has since been followed by all the larger parishes in Scotland; the number sent out at present by the parishes of Edinburgh and Leith being upwards of 700, by Glasgow somewhat more, and by Dundee, Aberdeen, and other towns, in proportion to their population.

"With the view of securing proper supervision, in carrying out the family system, this Board appointed an assistant to the inspector, whose sole duty it is to superintend the children boarded out, both boys and girls, and to find out good nurses for them.

"They are boarded with cottagers, farm servants, or tradespeople, and not with persons who make the care of them their only task.

"Preference is given to people of character who have a steady income apart from the allowance for the board of the children, and who will receive and treat them exactly as members of their own family; and it is found that when the children are sent out young, they learn to call the parties to whom they are sent father and mother.

"They acquire toward them the feelings of children, and the result generally is that the nurses acquire for them a parental affection.

"In selecting nurses for the children the assistant inspector visits the parties who agree to take them (and there are generally plenty of applicants), and makes inquiry in the neighborhood as to their character; inspects the house as to its accommodation, dryness, and ventilation; ascertains if there is a well-taught school in the neighborhood; and it is only after being satisfied on all these points, that children are sent.

"He afterwards visits the nurse as well as the school at least eight times in the year; satisfies himself that the children are healthy, sufficiently fed, cleanly kept, and their education attended to; and, in addition, the Inspector and Members of the Board, in rotation, visit the whole children boarded out once a year.

"People of excellent moral character are generally got to take charge of the children; but, should inferior persons be, perchance, selected, the close superintendence prevents them from doing injustice. Should neglect occur in any case, however, the children are at once removed; but although there are about 300 children boarded out, and, some years ago, there were 400, I have only had occasion to remove children, in consequence of neglect on the part of their nurses, on three or four occasions during a period of five years.

"The localities selected are generally small villages at a distance of ten, fifteen, or twenty miles from Edinburgh, and of convenient access by railway; and never more than four children are sent to one family.

"In consequence of our requiring the regular attendance of the children at school, the teacher has to fill up a schedule—showing their progress, and each day's absence, with the reasons given—which forms a check on the nurse. Our children are, consequently, the most regular in their attendance; are generally the best scholars, carrying off a large share of the school prizes; and when sent to service, prove as good servants as the children of the cottagers or workpeople not dependent on the rates usually do; certainly not inferior, and many of them rise to positions of trust. It is a rare thing for either a boy or a girl, who has been brought up by the Parochial Board in this way, to become chargeable to the parish in after life, which was not the case as to the children who were brought up in the hospital in town.

"In a Report by Mr. Adamson, the able inspector of Glasgow, issued in August 1864, reference is made to results, equally satisfactory, in the case of the children who had been boarded out and brought up in the same way by this Board.*

"The Board pays to the nurse, for each child sent to board, two shilings and sixpence a week, which covers board, lodging, washing and mending. The Board, in addition, provides clothing, which is sent from the poorhouse, of a good quality, and not uniform in color or kind; and also pays the fees to the schoolmaster, the same as paid by the children of the district. In cases of sickness, which is rare, the nurse obtains the services of a medical man in the district, for which the Board pays. The total amount of all these charges for each child, for the past year, including the salary of the assistant inspector and all expenses connected with the children, was £8 10s 10d.

"It is the nurse's duty to take the children with her to the church which she attends, to see they attend the Sabbath school, and study their lessons, and, in short, to deal with them in every way as if they were her own; and, with the view of extending the benefits of the domestic influence on the children beyond the period when the Board has charge of them, we get the nurses to find apprenticeships for the boys, and service for the girls, as much as possible, with employers in their own neighborhood, so that the children may have an opportunity of visiting their nurses on the Saturday afternoons, or at other times when they get liberty; and, in these cases, the nurse continues her care over them, and washes and mends their clothes when necessary, for which they remunerate her.

"On such visits the children are received with friendly welcome, as if it were their home, and they thus contract the habit of returning to it at intervals, assured of meeting with advice in difficulties, sympathy in distress, and heart-felt congratulations on success.

"In the event of a boy or girl having to leave their service, through sickness or otherwise, they return to their nurse's house, and are often supported there for months, without any remuneration ever being asked from the Board. Should the nurse, however, not be in a position to do this, or wish assistance, the Board readily grants it, but this is seldom asked.

"Many cases have come to my knowledge where

* Florence Hill, p. 159.

* The boarding-out system has been pursued in Glasgow for upwards of an hundred years.

the child has in after life contributed towards the support of the nurse.

"The children are sent to board at all ages, but *the younger they are sent so much the better.*

"*If sent when at the breast, the nurse cannot help having a strong affection for them.* In those cases where the children are ten or eleven years of age, before they have come on the parish, and whose previous training has been vicious, the same good result cannot be looked for; still it is found that a religious education, kindness, and the moral influence of their new friends and associates, do much for them.

"Cases have occurred where such have acted well so long as under these influences, but on return to town, and meeting old friends, have fallen back into their old habits; hence this class are sent to the most distant localities, and situations found for them, in the district if possible, so that they may not be again brought into contact with their old associates.

"The children thus brought up are not only well educated, but understand and can discharge the various duties of a household, which children brought up in a school or hospital know nothing of; hence our children are preferred as servants and apprentices, to the children brought up in the various hospitals in this city, at a cost of as much as £50 a year each.

"We are still compelled to have a number of children in the poorhouse, when their parents are in gaol, or in sickness, and therefore the chargeability merely casual; and amongst them we daily see the evil effects of having a larger number of such children congregated together, as not only do they encourage each other in present evil, but the fact of being inmates of such a place has a debasing influence on their after-life.

"The evils attending the rearing of children in workhouses are well described in an article in the *Journal of the Workhouse Visiting Society* for September 1861. It states,—'The main objections to workhouse schools are, 1st, the keeping up a condition of pauperism in the children by the associations of the workhouse; 2d, the impossibility of teaching useful knowledge to fit the children for practical life, without the contamination of the adult. Communication with the adults, and the influence of the low tone of morality of pauperism, are inevitable. The mere learning in school is insufficient to overcome it, and the teachers strive against it in vain.'

"The danger here adverted to, of keeping alive the spirit of pauperism, is one which this Board has had particularly in view, and against which it has felt too many precautions could not be taken. In a large adjoining parish in Edinburgh, the managers or guardians some years ago arranged a plan by which they personally visited the children, after they had been sent to service, and endeavored to exercise a care over them; but it was found that the personal intercourse thus maintained by these parochial gentlemen, had the effect of keeping up in the children a feeling of their connection with the parish, and a depressing consciousness of dependence which was quite opposed to individual effort, and consequently to success in life.

"In fact, the blight of pauperism extended over, and deprived of beneficial influence, all these friendly communications—often well meant and attended with no small trouble on the part of the gentlemen who engaged in it—and the plan had consequently to be relinquished. The cause of this want of success it is easy to discover. It was that these gentlemen, in a higher station, having no connection with the children except that they were members of the the parish Board, instead of forming a link between the child and the kindly influences of home which the nurse can do, kept up a connection between the child and its former condition of pauperism, degrading it in its own eyes, and, when known to its fellows, subjecting it to their scorn.

"When a child is sent young to the country, or has been there for some time, and is taught to look on its nurse as its parent—I say parent, as we transact with the wife as the party having immediate charge, but the husband takes an equal interest in the child, and is equally regarded by it—and when the nurses are themselves quite independent of the parish, the child regards itself as a member of the family, its connection with the parish is neither felt nor understood; and I have often found that the only idea it had, was a vague one that the assistant inspector, who called so frequently, had somehow some charge over it, but it had no idea that it was a pauper; and would treat with the same horror and contempt, as is entertained by the respectable working people, a proposal to remove it to the workhouse.

"This removal of the consciousness of a state of dependence on the parish, and the engendering of a spirit of self-reliance which is cherished by the class with whom the children are brought into contact, is a sure means of preventing them from lapsing into a state of hereditary pauperism; a result which can be obtained by no method that I am aware of but the family system adopted by this Board.

"In adopting this system, in restoring, as it were, the lost link, and giving these poor children new parents and homes, with their sacred influences and endearing ties and associations, this Board is persuaded that they are acting in accordance with a law ordained by Him who has framed the moral government of the world; and the results obtained in the moral elevation and excellent education of the children, in adapting them for the duties they will be called on to discharge, in the position of life they are likely to occupy, have been such as might have been expected from a plan thus solemnly sanctioned."

"Confirmation of this favorable report by Mr. Greig—so far as she has had opportunities of observing—is communicated to us by a lady, who for many years has been led by her philanthropic labors among the working people of Edinburgh and the adjacent counties."

The favorable statements of Mr. Greig are fully corroborated by Mr. Anderson. According to him:—

"If the problem, how to deal with juvenile pauperism is ever to be solved, an effort must be made to strike at the root of the evil in a way which has not yet been done. What is required is a system which will purify the stream at its fountain-head, instead of merely attempting to do so half way on its course. The ragged and industrial schools have done, and are doing, a great work; but that work would be more effectually accomplished—if, indeed, it would then be necessary at all—were a system adopted by which the children could be reserved till they reach the age at which they now enter the ragged and industrial schools, and before they are found guilty of crime. Powers ought certainly to be obtained for the protection of children who are growing up, not only in ignorance, but under a system of slavery, both of body and mind, which it is deplorable to contemplate. Many of them are groaning under an iron heel of despotism—crushed to the ground by those who have, but do not deserve, the name of parents—subjected to hunger, cold, disease, and privations of every kind; and consequently their moral faculties viriated, and their physical powers degenerated and depraved.

One great advantage of the boarding-out system is, that the children are lifted above the atmosphere of pauperism, their ideas are gradually dissociated from

those pauperizing tendencies which would otherwise cling to them, and in the school they are put on an equal footing with the children of the other classes in the village. It is a remarkable fact, that out of the entire number of children brought up in this way during the last thirty years, the percentage who have turned out bad is almost *nil*. If the boarding-out system has a weak point, it is this, that the parochial authorities have no power to refuse to give up a child if claimed by its father or mother, let them be ever so worthless—and that, too, when it is perfectly well known that the child is being drawn down again into the gulf from which it had been taken. It would surely be a desirable thing to allow the Board to have the power to refuse to give up children to fathers and mothers who are habit and repute criminals or drunkards, and to devise means to compel such parents to contribute to the support of their offspring.

The number of children boarded out* is about 320, of whom 114 are orphans, 57 deserted by their parents, and 149 separated from their parents.

The "nurses" to whom they are entrusted are householders belonging to the class of respectable working people. The period during which children may be boarded out is from their birth until they are thirteen years of age. In adverting to some of the principal features of the scheme, I would first draw attention to the healthy condition of the children as compared with the same class living in the wynds and closes of Edinburgh. At a low estimate, the death-rate of children under thirteen years of age living in the Old Town of Edinburgh is about 35 per 1,000 per annum; and in one district, according to Dr. Littlejohn's report, it is 152 per 1,000 under five years. Now the death-rate of the "city children" boarded in the country has, during the last three years, been only 3 per 1,000 per annum!—a very striking fact, which ought not to be lost sight of. In the course of my visits I found it almost invariably the case that children who had been resident in the country for a year or two were strong and healthy, but that when they were at first sent out they could take scarcely any food, and were suffering much from the neglect as well as from the viciousness of their parents. The answer generally given by the "nurses" to my inquiries as to the health of the children was—"Aye, they were weak, puir things, when they cam' oot here, but they're as strong noo as ony o' the rest."

One thing which was impressed upon me more than almost anything else by my visits, was the importance of rescuing the children at as early an age as possible.

The rules adopted by the Edinburgh City Parochial Board are of a very simple description; and it is perhaps to their simplicity that much of the success of the plan is due. In selecting good "nurses" the Board inquires very minutely into the character, habits, and circumstances of applicants. There are always a number of applicants who have no steady income of their own. This class of people is avoided, and the Board prefers those who are not dependent on the children's allowance. The former class, rather than answer some of the inquries put to them, sometimes withdraw their applications. Certificates of character from respectable persons in the district must invariably be produced by the applicants. The questions put to them vary, but generally they are as follows:—Name, age, occupation, locality and address. If married, name of husband, and income. If they have children, number and ages, distinguishing males and females. Religion, and what church they attend. Number of apartments in house, and its sanitary condition. Number of beds. If the applicants keep lodgers. Distance from school. If the teacher and school are well spoken of in the locality. If the girls are taught knitting and needlework. If there is a Sabbath school in the district, and who superintends it. If the applicant is a widow, she is asked if she has brought up a family of her own; if so, where they are, and what they are doing. If they give her any assistance. What is her present means of living, and if she gets relief from the parish. When the Board are satisfied that they have obtained a suitable applicant in a convenient locality, the inspector visits the house, sees whether it is dry and well-ventilated; examines the state of the bedding and accomodation, arranges as to the separation of the sexes; and makes special inquiries in the district in regard to the applicant's character. The oldest boys and girls are sent to crofters, by whom they are employed on their little farms. All the children, before leaving the poorhouse to be boarded out, are examined by the medical officer, and certified as being in a fit state to be sent to the country. The average cost of 347 children boarded out during the year ending 14th May, 1870, was as follows:—

For board	£6 10 0
For education	0 10 9¾
For clothing	1 11 7
For travelling expenses and superintendence	0 9 6¾
For medical attendance . .	0 0 6¼
	£9 0 5¼

The parish of St. Cuthbert's commenced the system of boarding out children in 1843, and have had, for the last twenty years, an average of about 300 a year so boarded out.

The results, as corroborated by twenty-six teachers, to whom Mr. Anderson refers, are also, with high eulogies, confirmed by a number of prominent gentlemen. the names of whom are given on p. 103. It is with pleasure, therefore, that our author refers to the favor the boarding-out system is *meeting with in England* lately. The objections which have been urged against the system by its opponents in England, are completely answered by the success which has attended it in Scotland. In fact, the Poor Law Board of England have recently issued an order, giving power to "Unions" to send children beyond their own bounds. As to this order, Mr. Anderson expresses his conviction that it would have been better without the restriction that no child under two years shall be boarded out. The Edinburgh Board have found that the sooner children are sent to the country the better. There are many cases in which children, when only a few days old, have been entrusted to foster-mothers—"a plan which has hitherto worked admirably."

"In conclusion," says Mr. Anderson, "I would express a hope that I have in some degree, at least, shown that one of the most promising questions connected with social reform in the present day is that relating to the boarding out of pauper children. It may be said to lie at the foundation of all real efforts for the diminution of pauperism and crime, in respect that it lays the axe to the root of these evils; and I accordingly hail with much satisfaction the gradual extension of the system in England. It has been practised in Scotland for many years, in a quiet and unostentatious manner; and now that public attention is being drawn to it, we may look for still greater results than have hitherto been produced. In some districts reforms may with advantage be introduced; but the principle on which the plan is based is natural and true, and I have no

* Anderson, page 21.

doubt that any defects attaching to it will soon disappear. The boarding-out system takes under its control children who are, to all appearance, bound to grow up criminals if left to themselves, places them in decent families, provides them with education, obtains situations for them, and watches over their interests with a tender care until they are able to take their part in life, and fulfill their duties as respectable members of society."—l. c., p. 114.

In the same favorable manner Florence Hill expresses herself in the closing chapter of her book. She says, p. 233: "The boarding-out system has been pursued long enough, and under sufficiently varied circumstances to reveal its excellencies; and for us to estimate how far the defects disclosed are capable of removal or amendment. In Ireland, as a purely voluntary enterprise, it has attained marked success and won general approval; while in Scotland it has been widely adopted, and entirely administered by the parochial authorities. Of their satisfaction with it, under both a moral and pecuniary aspect, we are informed; and we have seen that it has obtained also the qualified approbation of disinterested but peculiarly competent observers, who are of opinion that an admixture of voluntary agency, including some additional supervision by ladies, would render it still more efficient.

"We could not conscientiously advocate the boarding-out system unless it be accompanied with constant and active supervision. This, the authorities assure us, is amply exercised by officials in those districts where the plan has originated with Boards of Guardians. But, zealous and kind-hearted as the officers appointed to this important duty may be, it must be performed by them to a greater or less degree as a matter of routine; the time of their visits of inspection may generally be calculated, and these cannot be sufficiently frequent to prevent, at any rate, the *possibility* of ill-usage. Moreover, a man, however thoughtful for the children's welfare, does not possess the knowledge of their wants and difficulties which comes to a woman almost intuitively; and to *supplement*, therefore, official authority by the *friendly* watchfulness which a woman of superior social position, residing *within easy reach* of the orphan's home, can exercise, appears to us the keystone of the system, ensuring to it public confidence and permanent success.

"An objection to the boarding-out system to which we have already referred, namely, the insufficiency of good country homes, is, we ourselves believe, from inquiry and observation, ill-grounded; and the experience of those benevolent persons who have introduced the plan in various parts of England, strengthens that conviction. All who are intimately acquainted with our humbler brethren (whose generosity in giving far exceeds that of the wealthy classes) are aware it is no unusual circumstance for a child who loses its parents to be spontaneously received into another family. Again, it must be remembered that where Mrs. Archer's scheme* is adopted, the very presence of the orphan will tend to improve the cottage in which it is placed, by laying it open to the inspection of a person whose good opinion the cottager will be anxious to preserve; while the orphan will in some respects enjoy even an advantage over the offspring of the cottager, namely, in its regular attendance at school, and still more in the fact that it is an object of interest to a neighbor of superior position who is responsible for its welfare, and able to remove it if the circumstances of its home are unfavorable."

As we intend to draw our own conclusions towards the end of this report, we take the liberty of here inserting the closing page of the meritorious book from which we have been so largely quoting (Florence Hill, p. 273):

"The 'family system,' in any form, is, we are aware, at present unrecognized by the regulations of our Poor-law,* and may be unknown even by name at the Central Board. Most respectfully, but most earnestly, do we ask for it their consideration. To it is attributed by M. Demetz a large measure of that success in reclaiming the young which has made his noble institution an exemplar to the whole world. Shall we be satisfied to achieve less for pauper children in England than is accomplished for criminal children in France? Mettray has converted to useful citizens 94·47 per cent. of the youths she has restored to liberty. Let us strive to show no less fair a return for all we expend in money, time, and care on our *children of the State!*

"We conclude with a summary of the principles proved, we submit, in the foregoing pages.

"1st. Our poor-law implies a right to aid from the State in all incapable of supporting themselves.

"2d. The State, in granting such aid, obtains a correlative control over the recipients.

"3d. The vast power she thus takes to herself furnishes her with means for the reduction of pauperism which her own interests, apart from higher motives, render it imperative on her to employ.

"4th. These means lie, as regards the young, in so training them as to impart the desire and the capacity for self-support.

"5th. One condition essential to this end is their complete separation from adults of their own class,—such separation being impossible where the school forms part of the same building with the workhouse.

"6th. That must be the best method of training children which is appointed by Nature,—namely, under family influences; and when artificial methods are employed, they should be made to approach the model as closely as possible.

"7th. The method practised in our Pauper Schools is contrary to that established by Nature; and fails signally in producing good results.

"8th. The 'family system,' as pursued in Industrial Homes, and as still more precisely followed in 'boarding-out,' while it secures separation from adult paupers, conforms, as nearly as practical obstacles permit, to the course prescribed by Nature herself.

"9th. Its success has been proved by long and varied experience.

The general rules for the care of abandoned children in France are, in their majority, those laid down in the decree of the Emperor Napoleon, of Jan. 19, 1811. This important law is as follows:—

1. The class of children whose education is obligatory for public charity, comprises foundlings, abandoned children, and orphans.

2. Foundlings are those whose parents are not known, and who are picked up at any place, and are carried to such institutions as are provided for their reception.

3. These institutions must be provided with a turning box for their reception.

4. Every district ("arrondissement") is to contain at least one institution of that kind. The apparent age of the new comers, peculiar marks and clothes, must be recorded.

5. Abandoned children are those whose parents are known, or who have been supported by strangers, and finally abandonded.

* Enforcing superintendence and schooling.

* Has been recognized since, as stated above, in our extracts from Mr. William Anderson's book.

6. Orphans are such as have neither father nor mother, and no support whatsoever.

7. New-born foundlings are to have a country wet nurse at once; until this can be done, they are to be fed on the bottle, or nursed by a wet nurse in the institution.

8. The infants receive the necessary clothing, and remain with the nurse until the termination of the sixth year.

9. After the sixth year, they are apprenticed with agriculturists or mechanics. The price of boarding will be reduced with every successive year until the twelfth, when they will be at the disposal of the Minister of Naval affairs.

10. Sickly and crippled children, who cannot be boarded out, will be retained in the institution, and employed with work to which their age enables them.

11. The hospitals destined for the reception of foundlings are to find the expense of their clothes, food and education, and of the general administration.

12. Four millions of francs yearly are set aside for that purpose. Any deficit will be covered by the general hospital and municipal funds.

13. Wages cannot be paid except on the presentation of a certificate, as to the life of the nursling, of the mayor of the community the infant is boarding in.

14. Twice a year an inspection is to be held by a special commission, a physician, or the vaccinating surgeon.

15. Foundlings and abandoned children are subject to the supervision of the administration of the foundling hospitals.

16. The children being received and educated at the expense of the commonwealth, are at the disposal of the Empire. After the minister of Naval Affairs has taken charge of them, the authority of the administration of the foundling hospitals terminates.

17. After their twelfth year, unless the Empire has disposed of them, they are to be apprenticed somewhere—the boys with mechanics or artists, the girls with housekeepers, seamstresses, in shops or factories.

18. The apprentice agreements require money neither for master nor apprentice. The master has a claim on gratuitous service until the twenty-fifth year of the apprentice; the apprentice on board, lodging clothes.

19. The agreement becomes null and void in consequence of conscription into military service.

20. Such children as cannot be apprenticed because of their state of health, nor find any place outside, are retained inside the institution. For them separate shops are required.

21. The children cannot be reclaimed by their parents and returned to them, unless, if able, they refund all the expenses incurred for the foundling. Such obligations as the government has agreed to previously cannot be annulled by the fact of reclamation.

22, 23. Persons who habitually abandon children, and carry them to the foundling hospitals, are subject to legal punishment.

Still the special rules of admission of the foundlings of Paris (our France) have been greatly changed from what they were at the time of the indiscriminate receiving by means of the wheel ("tour"). A great many questions are asked concerning the abandoned infant, its parents, and the person presenting it, by a commissary of police.

1. Concerning the abandoned child: Name and surname, place and date of birth, police bureau where it has been inscribed. Has it been baptized? At what church? Legitimate or illegitimate? If the latter, is it acknowledged by father and mother? If it is unknown, describe clothes and particular marks; particular circumstances connected with the abandonment.

2. Concerning the parents: Name, age, occupation, place of birth, and present residence of the mother. Is she married and living with her husband? The latter's name, age, occupation, place of birth and present residence? If she is not married, does she give the name of the father? If she does, what are his name, age, residence, occupation, earnings or property? Is she abandoned or supported by him? Does she live with him? Precise time, reason, circumstances and purpose of the mother's arrival at Paris. Where has she resided, and what has she been engaged in for at least the last year? Papers, letters, certificates to sustain her declaration. Has she her own furniture or not? Amount of the rent she pays? What does she live on and what does she earn? Has she parents living? Their names, occupation, and residence? Are they able and willing to support her? Has she children besides the one she means to abandon? What has become of them? Is this the first she abandons? Has she been advised not to abandon her infant, and has she been given to understand that she may receive support for the purpose of raising her child? Has she been directed to the Central Office to obtain such support? What answer has she given? Has she been told that she will never know where her child will be, and that she will hear of it but once in three months? Has she been told of the legal punishment of false declarations?

3. Concerning the person presenting the child: name and surname, occupation and residence, circumstances inducing him (her) to present the child at the institution.

Unmarried mothers who express their willingness to nurse their own infants, have a claim upon aid from the public funds. Thus many nursings have been retained by them. This proceeding is by no means a new one, inasmuch as, early as in the eighth century, Archbishop Darthæus established the above rule in the newly established foundling hospital at Milan. The National Convention passed, on July 28th, 1793, a law to the effect that every mother who promises to care for her own infant has a right to be aided by the community. This law was suspended by an act of December 17th, 1797, constituting general foundling establishments, and by the law of January 19th, 1811, directing the institution of foundling hospitals with turning boxes ("tours"), and concealment of maternity. Still, the rule was again subverted in favor of the mothers willing to nurse their babies, and in consequence of the public institutions becoming crowded. The plan has acted successfully. In 1848, fifty-two out of the eighty-six Departments of France, awarded the gratifications to mothers. Thirty-four refused it. In these fifty-two, with a population of 18,866,030, and with 44,976 mothers aided in the above manner, there was one foundling to 420 inhabitants, and one abandonment to forty-nine births. In the thirty-four, with a population of 15,328,845, and no aid to the mothers, there was one foundling to 296 inhabitants, and one abandonment to 32 births. The aid granted is by no means of the same nature in all the cases. Some mothers are supported until they can resume their occupation. Some are aided with money for two years, the amount being half of the legal boarding money of the foundlings. Some are supplied with wet nurses, on the promise of refunding the expense in installments. A great many mothers who cannot keep their infants with them, and still do not wish to give them up entirely, avail themselves of this facility.

Duties of nurses and keepers to the infants and the administration:—The nurse is obliged, if she takes charge of the infant before weaning, to wetnurse it, to

provide a separate bed, not to wean it before being authorized to do so by the proper medical officer, to have it vaccinated, if vaccination has not been performed before, within three months, but not within the first three weeks after receiving the infant; to notify the medical officer in case she falls sick or gets pregnant, and, in case the infant is taken from her within the first month, for any reason whatsoever, to be responsible for the corresponding amount of her wages, she having been prepaid for the month when the infant left the hospital for the country.

Duties of nurses and keepers, from weaning to the fourteenth year:—To provide a separate bed; to send to common school after the sixth year; to provide instruction in the first principles of religion; to send to church on Sundays and holidays; to notify the authorities within twenty-four hours, if eloped.

Duties of the same at every age:—Treat him (her) with mildness; notify the physician of any sickness within twenty-four hours; on no condition leave him in charge of another person without permission; take charge of no other child without permission; look for all the necessities of the child, and for its clothes, etc.; the clothes and linen given by the institution must be reserved for his own use exclusively; if the child is remanded by the institution, deliver him and his property at the local office; notify the proper officer three months in advance of any intention of returning the child; notify of death within twenty-four hours, and return neck band and property within a week; present child and property any time any of the authorities may require it; in case the child's parents turn up, never correspond with them, and inform the authorities; teach him a trade or agriculture; never send him away without due notice to the authorities; inform them of bad conduct; in case of elopement attend to the necessary steps and inform the authorities.

Duties of the administration towards the nurses and keepers:—Regular payment, at their place of residence, and within two months after the quarter has elapsed, of wages, gratifications, and indemnities; delivery of the necessary clothes in conformity with the law; gratuitous medical treatment and medicine for the child in case of sickness; payment of an indemnity for the years in which schooling is obligatory.

Extra remunerations are paid with every new lot of clothes delivered by the administration, for keeping the child regularly at school, for regular religious instruction, for keeping him to his twelfth year, for teaching him afterwards a trade or agriculture.

The recognition of the infants sent to the country is rendered possible by their wearing a neck band of a certain description. It must be worn to the sixth year, when it is cut off and returned to the institution. Sickness may necessitate its removal, but under the supervision of the medical or other authority only. In case of death, it has to remain until the official inspection has taken place. No payment is made when the neck band is removed without authority. After the sixth year the descriptive list of the child is deemed sufficient for its recognition.

Reclamations are not very frequent. In all France it takes place once in 100 cases. But one out of ten reclaimed children is legitimate. The majority of these are boys. The number of reclamations amounted to 3,322 in 1851; 3,737 in 1852; 4,390 in 1853.

The institution "Dei Trovatelliall Anunziata," at Naples, was founded in the thirteenth century.

It is connected with an educational establishment, and costs annually 400,000 lire. The average number of foundlings admitted yearly, by means of the wheel or turning-box, amounts to 1,900. The contrivances by which the mothers or other depositors enable themselves to recognize the infants at some future period, are simple enough, and very much like those resorted to in London in those times when the old method of receiving foundlings was not yet abolished; the modes of future recognition consist of broken coins, verses written on paper, etc. Every foundling is given a number, which is fastened to his neck by a band. At Rome he has the sign of the cross indelibly marked on his leg. The infant gets baptized within twenty-four hours. Two are given in charge of one wet nurse, who has the privilege of nursing but one after the third month. Before 1862, when the institution was controlled by the clergy, more regard was paid to baptizing than to feeding; three or four infants being in charge of a single nurse. Sick infants get transferred to separate wards. A pretty large number of healthy infants is retained in the institution besides; in 1865 there were from 220 to 230. They get nursed 15 or 18 months, and are entrusted to nuns in an adjoining building for further care. There are many women in Naples who are very desirous of receiving foundlings for wet nursing gratuitously, although they are limited to this one nursling, and, moreover, controlled and superintended by the institution. Undoubtedly they mean to prevent pregnancy by protracted nursing. Thirty-seven per cent. of the nurslings are cared for in this manner, 19 per cent. are paid for (in the first year about one and a half dollar, in gold, per month), and 140 per cent. are taken charge of by the parents. Only about 12 per cent. are returned to the institution, the rest are retained by those having them in charge. Boys in particular are retained, as they can be made available after their seventh year. Such children as remain in, or are returned to the institution are transferred, when seven years old, into the orphan asylum (gran stabilimento dei poveri). There they are schooled and taught a trade. The girls have a right to remain through life-time; may leave, however, when of age, resigning their claims upon the institution. After their seventh year they learn the elements and handiwork, work in common in large rooms, especially on sewing—two-thirds of their earnings belong to the institution. But few of these girls get married. In the foundling institution of Florence every healthy infant is farmed out. Every nursling pays ten francs a month; those who raise a boy to his eighteenth, or a girl to her twenty-fifth year, are remunerated with an extra gratification of 58 francs. The girls are given 235 francs when they get married; there were from 1855 to 1865, 1,403 who obtained this sum. In the same period 22,864 infants were transferred to the institution. Mortality was as follows:

	Males, per ct.	Females, per ct.
In the first year of life	31.63	28.63
In the second year of life	17.63	18.79
In the third year of life	1.08	0.91

There were in the kingdom of Italy (1867), 83 foundling institutions, beside a number of small institutions in small towns, viz., rooms in which a wet nurse is waiting for and on the newcomers, who are transferred at once into the charge of proper officials. Where funds are insufficient for the purpose the town is responsible. The average number of foundlings left in charge of the institutions, from 1863 to 1866, amounted to 33,222, viz., 3.85 per cent. of the whole number of births. Of illegitimate births there were but 1.23 per cent besides. Thus the number of illegitimate births is greatly less than in Germany or France.

Nor ought it to be overlooked that part of these 33,222 foundlings are legitimate children.

At Rome the foundling institution is connected with the large institution for the sick and poor, "Lauto Spiritu." The mode of admission is as easy as at Naples.

Very few babies are retained in the institution, usually but 65 or 70, and these are sick ones. When farmed out, the infant under a year pays one scudo (one dollar), from the second to the tenth year three-quarters of a scudo. With people who mean to retain the children beyond that time, special agreements are made; girls who do not find proper employment are at liberty to return. From 1830 to 1840, the average number of foundlings was 834, from 1860 to 1865 it amounted to 1,116. A large portion of those given in charge of the institution are born in wedlock. Dr. Erhard, a practitioner at Rome, told me that the delivery of their offspring to the foundling institution by their parents was quite common. As a rule, the mother, or more frequently the father, would carry the baby fowards the capital from any part of the territory in a basket, on top of the head. In certain way stations a woman is appointed to nurse the baby, and every official and most women of the neighborhood are able and willing to direct the carrier and his living freight.

The annual reports of the foundling institutions of St. Petersburg for 1857 and 1865, yield some very interesting facts. The foundling institutions consist of the following establishments:—

I. The department of the nursery, with offices, residences of officers, and attendants, etc.

II. Twelve country districts to which the children are sent in behalf of their education.

III. An hospital in city for the crippled and incurable.

IV. A country place, being the summer residence of legitimate children. Infants are admitted any hour by day or night, with the exception of such as suffer from smallpox or have passed the first year. Of children older than a year, only such are admitted as are found in the streets or presented by the police. The inspector in waiting takes the necessary notes concerning the age of the infant, and religion, but on nothing else. Within six weeks it may be reclaimed, but after this time it belongs to the institution. The number of the foundlings in 1864, amounted to 6,181; the legitimate children, 422. Of the children, 3,276 males, 3,327 females, 1,329 died, viz., 21.1 per cent. Of those 5,971 entering the institution within the year, the mortality was, 22.1 per cent. A large majority of the infants admitted were in their first week. 55 were admitted in moribund condition.

The foundling hospital of Moscow admitted from 1862-1864, 35,387 infants (male 17,446; female 17,941). In the same time the number of deaths amounted to 10,008 (male 5,278, female 4,730). Many were moribund when admitted, thus 521 died in the very first hour. The average mortality was, in 1862, 30.78; 1863, 27.38; 1864, 26.60; total average, 28.28 per cent. The largest number which can be accommodated in the institution is, or ought to be, 650. The smallest number ever present in these three years was 768, the largest 1,386. The wet nurses are selected from those offering their services. Of 57,206 applications, 34,209 were found available. Thus there were 1,088 wet nurses less than infants. This disproportion, though by no means anything like what we are in the habit of seeing in our country, is the result of the system through which they are obtained. The twenty thousand women confined in the Vienna and Prague lying-in hospitals are admitted on the promise of serving four months in the foundling hospital when required. Thus there are always a sufficient number of nurses in readiness for the new born and foundlings until they are transferred to private parties in the country.

The rules and regulations, mostly old, to a smaller portion proposed in the course of last summer, of the foundling institute of Lower Austria (at Vienna), are the following:—

The object of the foundling hospital is to procure to those illegitimate children who are admitted, an equivalent of maternal care, without regard to religious persuasion, and to preserve the reputation of the mothers as much as possible. As far as the interest of the institution will permit, it has to supply the medical profession with vaccine virus, to instruct young physicians in vaccinating, and to supply the public with reliable wet nurses.

Requirements for admission are the declaration of the community to which the infant or mother belongs, of the religion, and the proof of the infant being illegitimate in case permanent admission is wanted. Admission is either permanent or temporary, gratuitous or not. Admission is free for those infants who have been born in the lying-in asylums, but had to be transferred to a hospital because of sickness; exceptionally also for those whose mothers intended to ask for admission in the said lying-in asylums, but were confined before they expected to be so. In very rare cases, illegitimate children of those mothers are received who have been confined outside the clinical lying-in asylums. The other parts of the empire are liable to refund the expenses for those children whose mothers do not belong to Lower Austria, or to take charge of the infants if or when they are fit to be transported.

Admission, non-gratuitous, is granted to all illegitimate children born outside the asylums, or in the paying departments of the same. Temporary non-gratuitous admission is granted, when the mothers were received in the lying-in asylum after their confinement. Payment is required from the relatives or townships of the mothers, or when the mothers of legitimate or illegitimate children have fallen sick or died.

Maternity is kept secret, the name of the mother being known to the authorities only, with the exception of those cases in which the other provinces are liable to pay the expense incured by the admission and rearing of the infant, or where the child has to be transferred to its own province after the normal term of ten years; or where the child wants information concerning its family, after the eighteenth year of life, or in case of courts of justice inquiring for information. On no other condition, except on presenting the certificate of admission in the hands of the mother, is any information given. The institution takes charge of the child until the tenth year. The individual villages and towns are responsible after this period.

The children are kept and raised either inside the institution or outside. Inside the institution the infant is to have a wet nurse. Therefore, every woman obtaining free admission to the lying-in asylum, is bound to serve as wet nurse during a period of four months or less, if her child dies. During that time, as a rule, the nurse has her own child; in case of particular fitness, she will have to nurse two infants, never more. The women, moreover, are obliged to work on the premises.

Children with contagious eruptions are transferred to an hospital. Such nurses as take particular pains with an additional child, beside their own, have a claim upon an extra gratification. Outside the premises of the

institution, care ought to be taken that, if possible, mother and child be not separated. For this reason, the child is to be trusted either to its own mother, or to such relatives or friends as are designated by her, or to strangers selected by her. Under equal circumstances, breast-milk is preferred to artificial feeding; in case the former is declared an absolute necessity by the physician, or if the party live in Vienna, or at some other place equally unfavorable, parties with breast-milk only are accepted. When the mother has no recommendation to make concerning the future abode of her child, it is selected by the physician or director of the institution. Strangers expecting to take charge of an infant have to present certificates on their general character, their circumstances, etc.; mothers retaining their children have to prove their domicile and give information of any moving. Such parties as are known to be particularly trustworthy and attentive, may be permitted to take charge of several children; but these must be of different ages and sexes, to prevent mistakes as to identity. The determination of the time when the infant is to leave the institution depends on the physician or director. Board is 54 Austrian florins per year. Besides, there is a quarterly premium of three florins for the first two years. Superintendence of the infant is entrusted to the mother and relatives, in Vienna, and the other large cities an authorized physician; in the country, the authorities and benevolent associations.

The foundling is removed from under the care of a party when the said party, promising to raise an infant on the breast, resorts to artificial feeding; when the parties are known to treat and feed the child badly, or when they live in injurious places; and further, when the children are found in the charge of other persons than those to whom they have been given in charge. In this latter case the courts of justice may inquire into the reasons for such transfer. Every mother has a claim upon her child any time she means to do without the help of the institution; as long as the child is in the charge of the institution, the proper authorities are its legal patrons. Wet nurses cannot be permitted to accept a private place unless they have served two months in the institution. A wet nurse can be exchanged but once, and within a week only.

Admissions in the foundling hospital, Vienna:—

1860.	8,842....	6,278	died before the end of 10th year.
1861.	9,654....	8,135	" " "
1862.	8,935....	7,375	" " "
1863.	9,408....	7,615	" " "
1864.	9,795....	7,870	" " "
1865.	9,434....	7,187	" " "
1866.	9,294....	8,087	" " "
1867.	8,399....	6,309	" " "
1868.	8,148....	6,815	" " "

The percentage of deaths is by no means a small one, and can be estimated only for the several years. The death rates for the several years are not given. If we compare the results of general statistics, according to which the mortality of the Vienna foundling hospital, in the first year, cannot be less than 45 per cent. of those admitted. It is to be hoped that this mortality will be greatly reduced by a strict adherence to the plan of supplying the farmed-out children with breast-milk than was done formerly. Since the extensive and thorough discussion of the subject in the Vienna Medical Society, more than a year ago, a favorable change will probably have taken place, the more so as the government has given its particular attention to the cause of the foundlings. The above rules and regulations are in part the result of the efforts and changes of last year.

The vast majority of the foundlings in Prague are those who have been born in the lying-in asylum. The foundling hospital receives the infants nine days after their birth, and from there they are distributed over the country. Under ordinary circumstances they are to remain in the province of Bohemia, so that the necessary superintendence by the authority and physicians is not rendered too difficult. The attempts at raising the infants in the institutions have been given up. In the city of Prague the infants are to remain only when no party can be found in the country. Relatives of the infant when willing to take charge of the same are preferred; but they are not paid. Nor is its mother to retain the infant. A woman from the country offering her services to one of the new-born foundlings must be within seven months after her own confinement, and less than forty years old. She may have another foundling in case her own child dies. A woman who loses two infants in one year is not trusted any more. A woman may have charge besides the infant of one or two other foundlings; she must present certificates as to her reputation and circumstances; she is examined as to her physical fitness; she is paid monthly, and receives an extra gratification when the baby is eight months old. No baby is given out before it is nine days old. In winter they are not sent to any great distance; feeble infants remain in the institution.

With their sixth year they must be sent to school. Schooling is free. At ten years of age the obligations of the foundling institution ceases, and the village or town of the mother is the custodian of the child. The parties with whom the child has been hitherto may retain it until its twentieth year without charge, but after that age the foundling has the disposal of his own person and work.

The own mother may reclaim the foundling in case she can prove her ability to support him. The parties in charge can be permitted to adopt him, so can strangers who prove their good standing and circumstances, and on the condition either of the mother's consent, or the child being ten years old.

Among the rules of bringing up illegitimate children in Munich, are the following:—

Police superintendence takes place in the cases of all those who are entrusted to strangers, while the law permits of no such control when the child remains in charge of the mother or other relatives.

It is a misdemeanor, which is punished, to take charge of strange children under eight years, without the approval of the police authorities, or after such permission has been retracted. Permission is refused unless the character, circumstances, and locality of the petitioner is satisfactory. Most of the infants who are given in charge, are not nourished by breast-milk, therefore certain dietetic rules are enforced. Cellar and attic lodgings are excluded. The infant boarder is to have a bed and a bedstead of its own. No woman obtains permission when her own children are neglected, cachectic, or afflicted with contagious or exanthematous affections, or when she is sick or weakly. More than one child (two up to the age of a year), never more than four, are allowed where circumstances appear very favorable. Persons who have lost several boarders are suspected, and generally deprived of their license. Some may, when their boarders died when very young, retain the license for a boarder of two or three years. No child is given in charge of strangers without having been examined by a medical man. Thus, many a lurking disease, as rhachitis, hernia, etc., are early detected. In case of sickness medical attendance must be resorted to immediately.

According to Farr, of 392,224 children born in England in 1867, there died before the end of their first year 65,464, viz., 16.69 per cent. According to the religiously conscientious Prof. Ritter, of Prague, the mortality during the first year, of legitimate and illegitimate children, born alive in 1855–61 was 25.36 per cent. in the Austrian empire. In Hungary alone, in 1862–65, 24.95 per cent. In Berlin, according to Chammisso, the mortality of all the infants born alive from 1816 to 1841, was 22.7 per cent. up to the end of the first year, 33.5 of the third, 36.9 of the fifth. The rate was lower in 1842–1860, but in 1861–66 it was 28.4 per cent. up to the end of the first year. In the following years it did not increase, and was even less in the fourth and fifth.

According to the Thirty-first Annual Report of the Registrar-General of Births, Deaths, and Marriages in England, abstracts of 1868. London,—1870:

The death-rate amongst 100 infants born alive in England was in 1868:—

	M.	F.	Total.
Within the first twelve months....	16.8	14.7	15.5
At 1–2 years.....	5.2	5.1	5.19
From 0–5 years.....	27.5	24.7	25.6

The percentages of deaths within the first year of life, in proportion to the number of total deaths, have been, according to Wappæus, in

Ireland.....	1845–1854.	28.80
Bavaria.....	1835–1850.	36.31
Saxony.....	1834–1849.	36.20
Austria.....	1849.	27.39
Russia.....	1816, 1825, 1834, 1849.	26.31
Sardinia.....	1828–1837.	26.22
Tuscany.....	1852–54.	25.71
Netherlands....	1848–53.	23.90
England.....	1850–54.	23.49
England.....	1834–44.	22.06
Sweden.....	1841–50.	23.14
Denmark.....	1845–54.	21.55
Holstein.....	1845–54.	19.60
Norway.....	1846–55.	19.05
Belgium.....	1841–50.	18.77
France.....	1853	17.70
Hanover.....	1853–55.	17.61
Sleswig.....	1845–54.	16.90

In all the above countries, there were in the periods mentioned, altogether 15,204,185 deaths. Of these there were 3,887,094 deaths of children born alive who did not reach the end of their first year. Thus the proportion of the infant mortality under a year to the total mortality is 25.57 to 100. Besides, there are 4.75 per cent. of still-born; thus a total mortality, still-born included, under a year of 30.32 per cent.

In the above countries and periods, 20,646,144 children were born alive. Thus of all the children born alive, 18.83 per cent. did not reach the end of their first year.

The mortality of the second up to the fifth year is much less. The death-rate (in proportion to the total deaths) is 15.03 per cent. Thus, of all the deaths in the above countries and periods the rate up to the fifth year amounts (including still-born) to 45 per cent.

A comparative table, taken from Oesterlen, exhibits the following figures relating to the mortality of the first five years.

Of 100 children born alive, died, in

	0–1 year, still-born included.	1–5 year.	0–5 years.
Bavaria, 1835–51.....	32.81	7.71	40.52
Sardinia.....	22.68	13.86	36.54
Prussia.....	22.07	11.86	33.93
Netherlands.....	23.10	10.44	33.54
Belgium.....	19.44	12.30	31.74
France, 1853–54.....	20.13	11.35	31.48
England.....	19.29	10.94	30.23
Holstein.....	17.91	9.36	27.27
Denmark.....	18.60	7.85	26.45
Sweden.....	18.43	7.60	26.03
Norway.....	14.91	7.08	21.99
Average.....	20.85	10.03	30.88

In our own city of New York the rate of mortality is as follows. Of all the deaths taking place there were

	Under 1 year.	1–2	2–3	3–4	4–5	Total under 5 y.
1866	28.97 per cent.	10.15	4.07	2.32	1.65	47.17
1867	32.23	12.06	4.56	2.03	1.61	52.59
1868	32.77	11.60	4.22	2.41	1.49	52.50
1869	29.42	11.55	5.14	2.91	2.07	51.09

Thus we have an average of 30.85 deaths of infants under a year amongst all the deaths taking place in New York city, exactly the same per centage laid down in the above large lists collected by Wappæus. As the number of our births is not sufficiently established to justify any comparative statistics to be based upon it, we may safely assume the death-rate of 18.8 within the first twelvemonth, amongst 100 born alive to be correct for the city of New York. If we shall compare this average death-rate with the results of our public institutions, as found below, we are safe in saying that we build a great many costly palaces and spend enormous fortunes every year to no other purpose but to fill our graveyards with our infants and depopulate the city.

The death-rate of that class of children from which the abandoned inmates of public institutions or those turned over to the care of society are recruited, in naturally much higher than the average mortality. Many of them are illegitimate, had poor care before they were abandoned, lived in crowded tenements or large cities, etc.

Common-sense, experience, and statistics prove that the chances for life are less favorable for illegitimate and poor infants than for such as are born in wedlock and better circumstances. Even before birth the former are exposed to more dangers than the latter. The still-births in the former class are much more numerous. The statistical records of every country are unanimous in confirming that truth. The normal development from conception until birth depends on the health of the parents, in particular of the mother. Therefore the viability of infants born in wedlock and of healthy and careful mothers, is greater than of those born in the inverse conditions. Poverty, ignorance, injurious mode of living, sickness, immorality, misfortunes fear of detection, are just as many causes of death to the child, both before and soon after birth.

The following tables may illustrate the subject. There was amongst the births, 1850–1854, a percentage of illegitimate births, in the district of

Liegnitz,.....	Germany	12.1
Cologne.....	"	5.1
Aix la-Chapelle,.	"	2.8
Trier, ...	"	3.8

	Percentage of still-births.		Mortality under a year of those born alive.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Liegnitz	5.4	7.2	25.4	36.2
Cologne	5.1	7.2	14.6	23.1
Aix-la-Chapelle	4.0	5.9	15.9	23.4
Trier	4.8	6.3	13.9	23.0

Of 100 births there were still-births in Berlin:—

	1865			1866			1867			1870		
	M.	F.	Tot.	M.	F.	Tot.	M.	F.	Tot.	M.	F.	Tot.
Leg.	4.47	3.52	4.09	4.05	3.56	3.87	3.80	3.40	3.60	4.52	3.75	4.16
Ileg.	7.93	7.11	7.53	7.85	7.34	7.69	8.09	7.27	7.69	7.94	6.06	7.23

In Breslau:—

	1865			1866			1867		
	M.	F.	Tot.	M.	F.	Tot.	M.	F	Tot.
Leg....	3.47	2.92	3.22	3.90	3.12	3.55	3.75	2.61	3.21
Illeg...	4.41	2.43	3.47	4.09	3.27	3.67	4.18	5.56	4.88

In Vienna:—

	1869.		
	M.	F.	Total
Leg.	4.60	3.82	4.23
Illeg.	4.81	4.32	4.65

Besides, the greater mortality amongst illegitimate children born alive is an established fact. The same causes act both upon the fœtus and the born children.

There died in		Of 100 legitimate.	Of 100 illegitimate.
France,....	1840-57	13.9	30.3
Prussia,....	1820-34	17.1	23.6
"	1846, 25, 34, 43, 49,	16.5	30.2
Berlin,.....	1820-34,	19.9	36.8
"	1843,	19.3	33.9
Sweden....	1841-50	14.4	24.8
Stockholm,.	1841-50,	22.2	42.2
Bavaria,....	1835-51, male,	33.4	38.3
"	1835-51, female	27.9	33.8
Austria....	1851,	22.9	35.1
Saxonia,...	1847-49,	23.0	28.9
	Average,	21.8	32.5

A very careful table is the following, prepared by Prof. Ritter, of Prague.

Deaths at Prague, 1868, of 100 born alive:—

	Legitimate.			Illegitimate.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 month,	7.51	6.98	7.28	4.70	20.22	21.00	14.66	13.17	14.07
2 "	2.83	2.94	2.88	2 01	2.25	2.15	2.43	2.54	2.48
1 year,	26.05	21.19	23.67	28.12	26.86	25.53	27.09	23.97	25.53
2 years,	7.22	6.87	7.04	1.25	1.12	4.12	4.21	4.04	4.12
3 "	3.75	2.79	3.30	0 39	0.31	1.79	2.06	1.53	1.79
4 "	1.61	1.87	1.73	0.28	0.31	1.02	0.94	1.10	1.02
5th year,	1.84	1.44	1.68	. .	0.12	0.85	0.91	0.79	0.85
From birth to 5 years:—									
	40.58	34.13	37.26	30.05	26.08	28.06	25.17	31.48	33.42
Of 100 deaths:—									
1 month,	3.92	3.57	3.72	11.54	9.80	10.68	15.46	13.32	14.40
2 months,	1.48	1.43	1.48	1.08	1.09	1.09	2.56	2.58	2.57
1 year,	13.62	10.68	12.16	14.96	13.02	13.99	28.58	23.70	26.15
2 years,	3.77	3.46	3.62	0.66	0.54	0.60	4.11	4.00	4.22
3 "	1.96	1.39	4.68	0.21	0.15	0.18	2.17	1.51	1.86
4 "	0.84	0 94	0.89	0.15	0.15	0.15	0.99	1.09	1.04
5th year,	0.96	0.72	0.84	. .	0.06	0.33	0.96	0.78	0.87
From birth to 5 years:—									
	21.17	17.21	19.20	15.99	14.24	14.96	37.16	31.45	34.16

The number of still births is twice as large in illegitimate as in legitimate cases; in the first three months, in many countries, mortality is twice as large; up to the fifth year the mortality of ill-gitimate compared with that of legitimate, is 10.5: 6. At Berlin, from 1813 to 1820, twenty per cent. of infant deaths occurred in illegitimate children, while their birth rate was but sixteen per cent. of the legitimate.

Deaths under a year in 100 born alive in Berlin:—

	1865.			1866.		
	Male.	Female.	Total.	Male.	Female.	Total.
Leg.	20.76	26.88	28.87	27.16	18.54	22.92
Ill.	48.08	40.18	44.71	33.59	28.23	21.65

	1870.			
	Males.	Females.	Total.	Grand Total.
Leg.	37.16	31.52	34.34	37.80
Ill.	61.91	55.08	58.50	

In Breslau:—

	1865.			1866.		
	Male.	Female.	Total.	Male.	Female.	Total.
Leg.	32.21	29.10	30.69	28.90	33.28	36.12
Ill.	52.64	57.42	57.97	50.68	45.00	47.76

In Bohemia, 1869:—

	Legitimate.			Illegitimate.			Total.		Total.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 month,	12.01	9.21	10.65	19.04	15.70	17.40	13.02	10.16	11.58
2 "	2.82	2.21	2.65	4.49	4.26	4.35	3.06	2.45	2.82
1 year,	25.73	21.79	24.33	38.95	31.96	36.69	28.49	23.61	26.13
2 years,	5.17	5.38	5.28	5.00	5.01	5.01	5.15	5.31	5.23
3 "	2.46	2.64	2 55	2.17	2.20	2.18	2.42	2.57	2.49
4 "	1.65	1.53	1.54	1.15	1.12	1.14	1.49	1.47	1.48
5 "	1.09	1.11	1.70	0.72	0.75	0.74	1.03	1.06	1.05

Circumstances, occupations of parents, care and food, are known to have a considerable influence. Of 100 deaths at Paris in 1817–24, (those who died in hospitals not included)

	0-1 year.	0-10 years.
Occurred in the first "arrondissement"—comfortable.....	17	37
In its richest portion.....	14	32
In the 12th arrondissement—poor... .	25	50
In Monuffetard street—very poor.....	32	59

In London (1844) of 100 infants born alive to the gentry, died 20; to the working classes, 50. In the aristocratic families of Germany, died within five years 5.7 per cent.; amongst the poor of Berlin, 34.5. In Brussels, the mortality up to the fifth year was 6 per cent. in the families of capitalists, etc., 33 amongst tradesmen and professional people, 54 amongst workingmen and domestics.

A few more figures and we shall have done. Of 100 new born, the death rate amounted to

0-1 year.	0-2 years.	
23	47	in the foundling hospital of Lyons—breast-milk.
53	65	in the foundling hospital of Paris—mixed feeding.
63	71	in the foundling hospital of Rheims—artificial food.

Amongst the above figures relating to Lyons, there are numbers of babies nursed by their own mothers, and such as were nursed by strangers.

The mortality of those nursed by their mothers, up to the end of the first year was 2.8 per cent.

The mortality of those nursed by strangers, amounted to 30 per cent.

Even under the most favorable circumstances, the difficulties of raising the infants are very great. Whitehead found, of 952 mothers observed in the child's hospital of Manchester, but 629 in good health, 420 secreted a copious and healthy milk for a sufficient period, 95 proved but tolerably competent, and 95 incompetent wet nurses.

The mortality of foundling hospitals has always been very unsatisfactory. Before the end of their first year, of 100 abandoned infants, there died in

Paris.....	1789	60	Brussels.....	1811	79
Vienna.....	1811	92	"	1817	56
Madrid.....	1817	67	Belgium.....	1823-33	54
Dublin.....	1791-98	98	Moscow.....	1822-31	66
St. Petersb'g.	1772-84	85.6	Irkutsk.....		100
"	1785-97	76.2			
"	1830-33	50			

Improvements have taken place since greater care was taken, the food of better quality, wet nurses engaged, the infants farmed out. But still, at Bordeaux, the mortality differed greatly in the foundling hospital and the population in general.

The following statistics are also conclusive.

The mortality of infants under a year, amongst the working-men of Lyons, is at least 35 per cent., according to Devilliers; in well-to-do families it is 10, and in well to-do agricultural districts.

The average mortality of infants under a year is 16 in 80 of the departments of Normandy, and 75 amongst all France.

The mortality of all the new-born in France is 16 per cent. up to the end of the first year, according to the official investigations of Henschling. Compare with this per centage the following table containing the mortality of children less than a year old in four districts of the department d'Eure et Loire.

	1854.	1855.	1856.	1857.	1858.	1859.	Average.
Chartres	30.22	25.23	23.86	22.88	22.43	29.21	25.63
Chateaudun	26.46	30.59	29.46	30.28	28.49	36.40	30.28
Dreux	23.18	27.32	23.17	31.95	24.90	35.21	27.62
Nog. le Rotron	51.67	56.53	47.20	59.06	50 42	43.00	51 33

And further, remember the fact that the mortality of the infants born in these districts is much less than this average, thus rendering the average mortality of the little Parisians sent in charge there much more fearful. We can easily understand, then, the following results of official investigations.

Of the infants sent out by the "general direction of nursed children," and completely watched, the mortality under a year is 17 per cent., but 1 per cent. more than the above average mortality.

Those sent out on the same conditions, by private offices, and not watched, exhibit a mortality of 42.

The "assisted" infants of Paris, sent out by the above "general direction," on the same conditions, but always in poor health, the mortality is 55.

Amongst the foundlings of the department "Eure et Loire," which are bottle-fed, and frequently many by one woman, the mortality is from 60 to 75.

Thus, the difference in the care taken of and the food given the little ones, gives rise to a difference of from 17 to 75 per cent. in their mortality. As absolute necessities, Mr. Husson urges the shortening of the stay of the infants at the general hospital, and their transfer to the country, by means of doing away with many administrative formalities. Further, to omit vaccination at such early period of life, and just before starting, and to increase their comfort while traveling. He urges it the more, as the foundlings form more than one half of the assisted children, altogether 2.03 per mille of the whole inhabitants of France.

Mortality at Bordeaux in 1,000 children born alive:—

Age.	Foundling Hospital.	Total population of France.
0-1	517	232
1-2	122	96
2-3	40	47
3-4	15	26
4-5	14	15
5-6	4	10
6-7	2	7
7-8	8	5
8-9	3	4
9-10	4	4
0-10	729	446

Of 1,000 children in France, 554 reached their tenth year. Of 1,000 foundlings but 271.

Wasserfuhr has the following statistical contribution to the same fact. Of 1,113 children of Stettin, North Germany, who died before the end of their first year, there were,

	Illegit.	Working-men.	Mechanics.	Small traders.	Ill paid officials.	Well to do.	Total.
1858	120	166	93	112	51	14	556
1859	149	166	73	112	52	15	557

Of the whole population of the city 12.06 per cent. were in comfortable circumstances, 87.94 per cent. were in middle circumstances, or of the working classes. Of the dead children, however, but 2.52 per cent. belonged to the former, 97.48 to the latter.

A further illustration is yielded by the official statistics of the Grand Duchy of Baden. The official report takes as granted the fact that the Jewish population of the country is more careful in the rearing of their babies than the rest of the population. The two classes are stated to live in the same circumstances, climate and soil. The former lose 15 per cent. of their children, the latter 26 per cent. before they reach the end of their first year.

In 100 cotemporaneous births, in the countries of Europe, 4.75 are still-born. Of 100 deaths in the total population, 25.6 take place in the first year, and from the first to the fifth year, 15 more. A more accurate list of the yearly percentages is the following:—

Mortality under 1 year,	26 5	under 8	0.62
" 2 years,	5.6	" 9	0.56
" 3 "	2.6	" 10	0.46
" 4 "	1.8	" 11	0.42
" 5 "	1.35	" 12	0.38
" 6 "	0.99	" 13	0.38
" 7 "	0.78	" 14	0.36

Such is the average; but the differences are great. Thus, in Germany the rate of mortality in the first year varies between 14 and 40 per cent. This difference is due to the degrees of general physical and mental condition of the population. Thus, sometimes, vast differences are found in neighboring countries. As a rule, poverty, brutality, and mortality go hand-in-hand. This is not more wonderful than that from century to century, with increasing civilization, mortality should have decreased, and the average duration of life increased.

In the next five years mortality is less, as stated. Here, too, we meet with great differences. The average is 15. But while it is 17 in Prussia it is 8 in Baden.

To what extent external influences, management, etc., will bear upon infant mortality, is shown also by the deaths amongst the foundlings of Prague, inside and outside the Foundling Hospital, within the first year of life:—

1857	82.97 per cent	1864	77.52 per cent.
1858	90.46 "	1865	62.46 "
1859	87.07 "	1866	60.14 "
1860	86.95 "	1867	54.07 "
1861	89.71 "	1868	46.68 "
1862	88,79 "	1869	46.08 "
1863	93.19 "		

According to the above tables, the years 1857 to 1863 exhibit a frightful mortality. The history of these years yields a clue to this remarkable fact. For from March 1857 to June 1864 the institution was removed from the care of its former authorities and placed under the charge of the Sisters of Charity of the order of St. Carolus Borrowmæus. They were paid for every child in the institution. Now, the feeding of breast children makes no expense, but wet nurses are expensive. Therefore the house was crowded with infants, and the wet nurses reduced in number to such an extent that one of them had to nurse three or four babies. In addition, part of the house was retained for the use of the sisters, so that finally 80 or 100 infants had to be satisfied with the space formerly occupied by 42. Thus the mortality of the hospital rose instantly from 41 to 66, and in 1862 the total mortality attained the high figure of 83 per cent. At the same time, the mortality among the boarded-out

children was by no means small, it being 48 in 1859. It still continued rising, being 54 in 1863, after Prof. Loesehner, a celebrated physician and humanitarian, insisted upon removing the infants to the country. His error consisted in looking for the cause of deaths in the crowded condition of the house only. Thus, a smaller number remained, but the proportion of the wet nurses remained the same—and consequently the mortality also. The infants sent away were in their majority puny, feeble, almost moribund, and swelled the average rate of mortality. It required some years before the effects of the former mismanagement could be extinguished.

Last in order, not least, is the question where foundlings ought to be raised—in institutions, or private families?

Places inhabited by many can never yield an atmosphere as fit for breathing as well-kept private residences. Moreover, young infants, in consequence of their delicate constitution, and their not producing vital warmth by physical exercise, are confined to the house and room during the greater part of the year and day. Besides, offensive admixtures to the atmosphere of rooms in which many children are living cannot be avoided. Even the institutions in which adults are kept, suffer from the same influences, to such an extent that not unfrequently the very entrance into such a place is a guarantee of imminent disease, and portions of hospitals have sometimes to be closed. Alvine discharges and urine contaminate the air of infants' wards to a considerable degree. From this source originate the numerous cases of poor sanguification, and of constitutional diseases, such as rickets, scrofula, etc., even typhoid fever and scurvy; from this source comes part of the really immense mortality of foundling hospitals. Whenever the attempt is made to correct this cause of disease and death, you will find that this attempt is punished at once. Ventilation is never complete except by opening windows. To relieve the wards of their unbearable stench—I advise you to visit a large, fine-looking, whitewashed, clean ward in a foundling hospital, in a nursery and child's hospital, at 6 A.M.—you open the window, and in come the enemies of mucous membranes—intestinal catarrh, entero-colitis, bronchial catarrh, pneumonia. Of 88 deaths in the Nursery and Child's Hospital, New York, more than 40 are due exclusively, or partially, to pneumonia. These facts have been the causes of the universal changes in the rearing of the infants left on the hands of society in all Europe. At present, the former foundling institutions are nothing but depots for temporary admission, and speedy distribution about the country.

There may be drawbacks, also, as far as private boarding is concerned. But where, in such an individual case, or a number of individual cases, changes are required, they are easier to make than in institutions, which, as a rule, are more than comfortably filled.

Even if the feeding is the same in private boarding and public institutions, the results are more favorable in the former category. That a baby should live and thrive on artificial food, in a private family, is by no means a rare occurrence. Every attentive person, every medical man, has ample opportunities for such observations. That, however, bottled-fed babies in a public institution should survive, is a rare exception. In the wards of infants' hospitals everywhere the receiving of a baby in the purely bottle-fed department is acknowledged by all as amounting to a sentence of slow death. Moreover, the only article of food without which a baby could not be kept alive, viz., milk, can be more regularly procured by the poorest country woman than by the richest and most circumspect institution.

Besides, the nurses of institutions having charge of a number of infants at once, by day and by night, are very apt to, and surely will, lose the self-sacrificing patience and the everlasting attention which are absolute requisites for the sustenance of a young human being.

A task that requires all the holy instincts, the self-immolating, restless care of maternal love, is left sometimes in the hands of corrupt, lazy, whimsical, or malicious women, who make it their business to neglect their business, and are womanly and motherly only as far as they are so anatomically. It is much more probable that the poorest country woman who takes charge of a society's child, under the superintendence of the proper authority, under the eyes of her neighbors, and with motherly feelings developed in the poorest one bound in marriage and family ties, will succeed in saving a nursling from certain death.

A further reason why infants should be raised in the country, even under equal circumstances, is the statistical fact that they will thrive better. Of 100 children born alive, there died before the fifth year:—

	In cities.	In country.	Difference.
France....1853–'54	35.69	28.56	7.13
Holland...1850–'54	36.25	28.90	7.35
Sweden....1851–'55	38.86	24.50	14.36
Denmark..1850–'54	29.66	22.68	6.98
Sleswick..1845–'54	27.42	23.42	4.00
Holstein...1845–'54	29.92	25.29	4.63
Saxony...1847–'49	39.88	36.22	3.66
Hanover...1854–'55	28.70	26.47	2.23
Prussia...1849	36.02	29.47	6.55
Average.....	33.60	27.28	6.32

Of 100 deaths, of all ages, in England, there were—

	Up to the end of second year.	Up to the end of tenth year.
In all England	31.58	44.91
Cities with 100,000 inhabitants or more	35.12	51.39
Cities with less than 20,000.....	31.49	46.79
Manufacturing country districts.	35.36	45.90
Agricultural districts.....	24.33	35.40

Mr. Husson urges even the shortening of the preliminary stay of the foundlings at the central depot, although a number of wet nurses are kept there, and wants them transferred to the country instantly.

If any further proof was required, it might be found in the contribution of one of the members of the undersigned committee, who reports as follows:—

"He has, during several years past, assigned a few ladies, having comfortable and eligible homes in the outer parts of—and some of them completely out of—the city of Rochester, in caring for children that ordinarily would have been placed in charge of a wet nurse, could such have been found. The difficulty in securing good and reliable nurses has induced many mothers and fathers in moderate circumstances to place their infants as boarders with these matron women, some of whom will care for from four to six children. He has thus provided for many motherless young children, with such results as to justify him in continuing this course. There is no foundling hospital in that district. Five or six years ago one was attached to the St. Mary's Hospital of that city, but was soon abandoned. In the 'Rochester City Hospital,' with which he has been long connected, repeated efforts

have been made to have such a department instituted. He has always opposed it."

THE FOUNDLING ASYLUM OF THE SISTERS OF CHARITY IN THE CITY OF NEW YORK.

Of the Foundling Asylum of the Sisters of Charity in the city of New York we can give but few statistics, inasmuch as nothing is known concerning that Institution, except what has been published in a report of its doings, from its opening, Oct. 11, 1869, to Oct. 1, 1871. The tables given on pages 10 and 11 of that Report being very incomplete, your Committee has tried to obtain some more detailed statistics from the officers or the books of the institution, in order to lay the results of their examination before the State Medical Society. One of your Committee applied, for this purpose, to one of the lady superintendents, and was told "that there were no records, except those kept by the physician of the Institution, who had a part of his books at the Asylum, and a part at his own house." Requested to recommend that these books be laid open to examination, the lady referred your applicant to a reverend gentleman known as the superior of the Institution. He, in turn, stated that he had "personally" not the slightest objection to such an examination of the books, but that before deciding whether or not to permit it, he must think the matter over. Your Committee then applied to the attending physician of the Asylum, in the following terms:

"DR. REYNOLDS, 29 West Fourteenth street, N. Y.:

"DEAR SIR:—As I am about reporting to the State Medical Society on Foundlings, Foundling Hospitals, etc., for which purpose I have also availed myself of the statements and figures contained in the Report of the Catholic Foundling Asylum, as lately published, I take the liberty of hereby requesting you to permit me to look over your official records.

"Sister Irene has stated to me that the only complete records are kept by the Physician of the Institution, and Father Starrs says he has no objection to my so doing; still he has not given any direct permission, evidently reserving his final decision for further consideration or your consent.

"By informing me if, when and where you will consent to my inspection of the records of the Catholic Foundling Asylum, you will greatly oblige,

"Yours, most respectfully,

"DR. JACOBI.

"110 West Thirty-fourth street.
Jan. 29, 1872."

The answer we received, after a little delay, was the following:

"29 WEST FOURTEENTH STREET.

"DR. A. JACOBI.

"SIR:—The official records of the Foundling Asylum of the Sisters of Charity are in the possession of the authorities of the Asylum. I refer you to them.

"Respectfully yours,

"J. B. REYNOLDS."

After receiving this letter, we called on the Superintendent and Treasurer, Sister Irene, referring her to the above letter, and requesting her to permit us to examine the books, repeating to her, at the same time, the meaning and object of our request. She said she could not do so without first conferring with the other officers of the Institution, and that she would send an answer speedily. That answer read as follows:.

"NEW YORK FOUNDLING ASYLUM.

"DR. JACOBI:

"DEAR SIR:—After consulting with the Directors of our Institution, we see no reason to depart from our rule in your case. The published Report contains an accurate statement of all matters on which you are interested.

"Yours, very respectfully,

"Feb. 3, 1872." "SISTER IRENE, Treasurer.

We must confess that we were not aware that our interest in Foundling Institutions, and in this Foundling Asylum of the Sisters of Charity in particular, had been exhaustively satisfied by what the Report of 1871 was willing to publish. And for that very reason, and for the information of the State Medical Society, we thought it of importance to look over the records of the Institution, in order to arrive at the correct and complete statistics which the tables on pp. 10 and 11 of the Report do not yield, hoping that the same liberality would be extended as it always has been by the Commissioners of Charities. The fact is, that the physician who writes the Report, himself states that the records of the first year had been but indifferently kept; probably because, as he says on page 7, "when the task was undertaken, neither the Sisters nor the physicians had any idea of its magnitude," and because "the cares and responsibilities incident to the rearing of infants were new to the Sisters."

The report, which is herewith submitted, informs us (p. 11) that "up to Oct. 1, 1871, 2,560 infants had been left at the Institution; and of this number 1,377 were received between Oct. 1, 1870, and Oct. 1, 1871." A pretty careful report, as it appears, is given of the condition upon entrance of these 1,377. But the principal question which arises in our mind is: How many of those 2,560 infants left since Oct. 11, 1869, are alive this very day? And the further question: How many of the 1,377 children left between Oct. 1, 1870, and Oct. 1, 1871, have lived any length of time after the latter date? and, "How many will have lived to see the end of *their* first year?"

From the table (p. 11) we learn that 40 per cent. of the 1,377 infants left during the second year were alive at its close, Oct. 1, 1871; 4 per cent. being reported discharged, and 56 per cent. as dead. At all events, as we have no statistics of the previous year, we have no right to assume that such of the 1,377 admitted during the year as were surviving at its close, will every one live, and not go to swell the percentage of yearly mortality. It is safe to assume that a large number of those admitted during the year, especially of those admitted at very early age, and living Oct. 1, 1871, have died since that date, or will die before reaching the end of their first year. If the records of the last two years had been carefully kept, it would be found, and if the records of the next year or two will be correct, it will be found—that, following up every single infant or child from its admission to its discharge or death, the rate of mortality given, 56 per cent., is far below the truth. A slight mistake in the account is also the following, if our way of comparing the living with the dead is the correct one: Of the 1,377 there are 51 discharged, which ought not be counted at all. Of the remaining 1,326, 554 are alive, 41.7 per cent., and the rest, 58.3 per cent., died according to the figures of the report. As it is, and it would seem against their wish, the managers of the Foundling Asylum of the Sisters of Charity have been obliged to withdraw a number of children from the bad influences of hospital wards. They say they have been compelled to board many babies out, "as the Asylum is too small to ac-

REPORT TO THE BOARD OF HEALTH.

Present Capacity of the Institution.	NUMBER OF INFANTS. In the Institution, Dec. 31, 1869.		Received during the year 1870.		Placed out at nurse during 1870.		Remaining out at nurse, Dec. 31, 1870.		Sick belonging to the Institution, Dec. 31, 1870.		Taken sick during 1870.		Received a sickly and dying condition during 1870.		Received after premature birth, during 1870.		Died inside during 1870.		Died outside during 1870.		Discharged during 1870.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
85 Infants.	30	61	727	672	353	320	257	130	14	13	198	92	206	290	58	46	304	256	106	180	98	84
40 Adults.																						

Up to October 1st, 1871, 2,560 infants had been left, and of this number 1,377 were received between October 1st, 1870, and October 1st, 1871. The following table will show the condition in which these 1,377 infants were received, how many are living, how many have died, and the causes of death:—

WHOLE NUMBER from Oct. 1, 1870, to Oct. 1, 1871.	CONDITION UPON ENTRANCE. Good.	Poor.	Dying.	Premature.	Exposed.	Syphilitic.	LIVING.	DISCHARGED.	DIED. Died in Hospital.	Died at Nurse.	DISEASES WHICH CAUSED DEATH. Intestinal.	Pulmonary.	Bronchо-intestinal.	Pneumatuty.	Syphilis.	Inanition.	Erysipelas.	Convulsions.	Various.
1,377	526	459	153	132	57	50	554	51	347	425	462	55	83	84	49	14	4	13	*

* 1 Puerperal Hæmorrhagica; 2 Basilar Meningitis; 1 Intestinal Perforation; 1 Chronic Hydrocephalus; 2 Measles; 1 Small-pox.

The figures relate only to the year from Oct. 1st, 1870, to Oct. 1st, 1871

commodate all the children" (p. 5). Thus indicating their tendency of accumulating the babies within an institution. They are compelled to give up this tendency from the facts stated by the attending physician, who, speaking of the first and smaller institution, admits (p. 8) that "the results of overcrowding soon became evident in daily-increasing mortality." It is but fair to state as his opinion, which, however, is not borne out by facts: "Experience [of one year!] forces us to acknowledge that the chances of rearing infants in a well-regulated institution, with large, sunny, well-ventilated wards, are fully as good as in the outside nursing or boarding." And again (p. 13): "It would be unfair to attribute the larger mortality in foundling hospitals chiefly to causes to be found within the hospital. We should consider the condition in which the infants are received." Which remark is followed by this exposition of the medical gentleman: "Some are exposed carelessly or unavoidably to cold in their transit to the hospital, entering seemingly perfectly healthy; but in a few hours the extremities become wrinkled and shriveled, the skin upon the hands and feet harsh and dry, feeling like thin parchment, and too large for the tissues within; jaundice ensues, and deepens day by day, while the body diminishes in weight, and the little ones quietly sleep into death."

As your Committee labors under peculiar difficulties in having nothing to lead them but one report, we again direct your attention to some figures contained therein. You will find that in the last year recorded there are said to have been 1,377 admissions, and that there are 554 living. We may admit the latter, inasmuch as the financial report states (p. 16) that the City Comptroller paid to the Institution, as per capita allowance, $39,084. 67 from Oct. 1, 1870, to Oct. 1, 1871. The amount paid by the city to this private charity being $8 monthly for every child they take care of, that sum covers 4,885. 5 monthly, or 407.67 annual boards. Thus, when we take into account that there are a great many more boards to pay in the last months for those who have not yet had time to die, than in the former months of the year, the figure is herewith assumed to be correct. The low figure of $9,815, which has been paid by the Comptroller from October, 1869 to 1870, when 1,173 infants or children were received, proves one of two things—either that the Comptroller did not pay through all that time, or that but few babies lived long enough to swell the expenditure on the part of the city. How many of the 1,173 received in the first year have survived, we do not learn; the books, as the report says, have not been well kept; but we do know, from the report, *that* 2,560 *have been received in two years, and* 554 *are reported as surviving. Percentage, it appears, according to "official" accounts,* 21.64 *alive, and* 78.36 *dead.*

If there should be a mistake, which does not appear to be probable, it is the fault of the report and the impossibility on the part of your Committee to obtain further details.

There is one feature in the management of the Institution which is favorable—as it would seem, however, (p. 5) against the wishes of the managers. Those infants or children who have no room in the house are boarded out. Thus, many are under the same or nearly the same circumstances in which the offspring of the poor die or thrive. The few ladies of the Institution cannot possibly superintend those who are boarded out except on those days when their nurses come with them to get paid. Close supervision being an absolute necessity, although an impossibility under these circumstances, the many cases of poor, puny, ragged babies seen in the public Dispensaries of the city by the attending physicians, and supplied with certificates of death by them, and with coffins and transportation by the commissioners of charities, are easily explained. It may also be, that the impossibility of a close superintendence, from want of help, has been the cause of the boarding out of the infants in the city rather than in the country. Very few indeed, are sent to country homes.

The mortality rates of the Infants' Hospital at Randall's Island do not look promising; on the contrary, they are bad in proportion to the poor condition in which the infants are received, and the numerous and well-known drawbacks, principally consisting in the difficulty of obtaining proper help, that institution is suffering from. The admissions in 1869 amounted to 1,278, at an average of age 4 months and 14 days. Thus the earliest period of life has but few representatives. Of the 606 admitted in the first half of 1869, but 17 remained in the house in Feb. 1870. Their average age, when admitted, was 6 months and 19 days. Their average time in the hospital was 7 months 25 days. Their average ages at that time was 1 year 2 months and 14 days. Of the rest, 227 were discharged at an average age of 12 months 21 days. They had been admitted at an average age of 10 months 23 days, and remained in the hospital but 1 month 28 days. 362 deaths took place. The average ages, when admitted, were 3 months 2 days; at death 4 months 11 days; and their average stay in hospital but 1 month 9 days.

Recapitulation for that period: Total, 606. Deaths, 362; discharges, 227; remaining, 17.

But let us look over a number of years to obtain more elaborate statistics. In the Infant Hospital, Ward's Island and Randall's Island, since the summer of 1869, there were total admissions of infants, either with or without their mothers, and including always those who remained from previous years:

	1868.	1869.	1870.	1871.
	1887	1516	1176	1088
Died	1039	710	429	271
Discharged	595	552	552	587
Remained	253	254	195	240

PERCENTAGES.

	1868.	1869.	1870.	1871.
Died	55.06	46.83	36.49	24.68
Discharged	31.53	36.42	46.93	53.46
Remained	13.41	16.75	16.58	21.86

These lists exhibit a gradual diminution of mortality, and a gradual increase of those who get discharged or remained alive. These facts are due to greater general and medical care, to the employment of a larger number of wet-nurses, and to the diminished number of admissions.

Still, the real proportions can be got at only by comparing the real admissions, those who remained of the preceding year not included.

Thus we arrive at the following figures:

	1869.	1870.	1871.
Admissions	1263	922	903
Of whom were discharged	552	552	587
The recorded deaths amount to	710	429	271

This result is very unfavorable certainly. If you take off the discharges through the year, you have infants admitted and not discharged:

In 1869, 711 admissions; 710 deaths.
In 1870, 370 admissions; 429 deaths.
In 1871, 316 admissions; 271 deaths.

That is, a surplus of 45 living children over deaths amongst the *bona fide* admissions (discharges deducted). You can get at the final result in still another way.

There were remaining on Jan. 1, 1868, and admitted during the year 1868			1887
Newly admitted, 1869			1263
Newly admitted, 1870			922
Newly admitted, 1871			903
Total			4975
Discharges in 1868	595	Deaths in 1868	1059
Discharges in 1869	552	Deaths in 1869	710
Discharges in 1870	552	Deaths in 1870	429
Discharges in 1871	587	Deaths in 1871	271
Total discharges	2286	Total deaths	2449
		Total discharges	2286
Grand Total			4735

These figures leave a balance of 240 living children in four years, as above, and yield the lowest rate of mortality, that of last year, *discharges not counted*, as amounting to 85.8 per cent., the percentage of those remaining alive to 14.2.

This low percentage is particularly due to the fact, that a certain number of the inmates of the Institution were foundlings, in the real meaning of the term, and had to be raised on artificial food. We have before us the names, etc., of these infants, as admitted in 1868, 1869, and 1870. Their number amounts to 231. Of these, as many as 17 were returned to their mothers after a short period; 19 were adopted and 195 died, proving the absolute fatality of their condition.

The Commissioners of Charities, under whose superintendence the institution on Randall's Island is administered, deserve the credit of never attempting to conceal the facts—their own reports speak volumes—and of trying their best efforts. They have employed as many wet-nurses as they could obtain, have improved their building, tried to provide effective medical and other help, and have finally succeeded in reducing the death-rate, and, as the figures of the reports will show, to prolong life. Still, they are aware that their best efforts in the old methods have been greatly unavailing, and have frequently followed the advice of their medical board and house physician.

The printed minutes of the Commissioners of Public Charities and Correction, of last year, contain a proposition to make preparations for boarding out babies, submitted by the Medical Board of the Infant Hospital, Randall's Island. The Commissioners have, we believe, deferred further action only in consequence of the necessity of keeping up all their numerous charities, and from their fear of not being capable of meeting a momentary increase of expenses. But lately a paper was prepared, which was intended to be circulated over the signatures of the Commissioners, containing similar propositions. It is but right to say, that they considered the publication impracticable at that moment, but approved of and endorsed all its contents. One of your Committee has requested and obtained permission to publish it, and has done so in an Address to the Medical Society of the County of New York, which has appeared in the January number of the *New York Medical Journal*. It is written in the form of a letter, which was to be distributed among such persons as are mentioned in it, and, with its remarks and suggestions will explain itself. It reads as follows:

"Dear Sir: Your special attention is herewith directed to the claims of a class of destitutes who, as they are helpless, are the more deserving of the sympathy of the just and benevolent. In their behalf the Commissioners of Charities and Correction have tried to improve the methods of supporting, raising, and educating, have built costly edifices, and gladly availed themselves of any advice their medical boards could afford them. Still, the results of their efforts are far from being satisfactory, and, after careful consideration of the difficulties to be overcome, and the aims to be reached, the undersigned request you to give your attention to the following remarks, and to lend your valuable aid in furthering their endeavors.

"The class of destitutes in question are the foundlings and abandoned infants, amounting to the number of about three thousand a year in the city of New York. Their claims have been so well acknowledged of late, and the public at large have become so conversant with the humane and political aspects of their case, that a number of associations have been formed for the purpose of either raising them or educating those who survive.

"From a report laid before them by the medical board of their Infant Hospital, which admits yearly about 1,200 or 1,400 of these destitutes, we gather the fearful and embarrassing fact, that infants collected in large institutions, of the best hygenic designs, with the most careful dietetic and medical care, will die in large numbers. This immense mortality is particularly great in earliest infancy. Of 47 deaths in New York city under five years, 39 occur under two years, and as many as 30 under one year; the mortality of abandoned children under the charge of public or private authorities is still larger. The very accumulation of infants under one roof, the scarcity of breast-milk obtained, the difficulty of securing competent nursing for a large number of infants, the ravages of contagious diseases, the poisoning by deleterious exhalations and excretions, etc., are just as many obstacles to the health and life of the young inmates of our public institutions. The difficulties of raising infants in our institutions, and of gathering a sufficient amount of breast-milk in them, induce the undersigned to try a change with a part of their inmates. A number of them are to be given in charge of responsible parties in the country surrounding New York. The not unfavorable results of farming out even in cities, when compared with the mortality of institutions, encourage us to hope that infants farmed out in the country have a much greater certainty of life, and a healthy future. And with regard to this plan, we have herewith taken the liberty of sending you this communication.

"We propose to farm a numberof babies out until they have reached the end of the third year. In particular cases, special arrangements may be made beyond that age.

"Babies who have no teeth are expected to be fed on breast-milk exclusively. Such as have from two to four teeth, on mixed food. Afterward they are to be weaned according to such rules, concerning the feeding of the children, as shall be laid down by the undersigned or their medical board.

"A single party is to be intrusted with but one nursling. A medical examination only can decide whether, in exceptional cases, a woman is fit to nurse two infants. She may, however, obtain an older child in addition to the nursling.

"She must either be married or a widow, or very well recommended. She must have plenty of breast-milk for the nursling in charge, no matter whether she has lost her own baby, or has sufficient nourishment for two (her own and the stranger). She must be healthy, not destitute, not intemperate, and known to be industrious, and not entirely dependent on the board paid for the nursling. She has to present a certificate from responsible parties—physicians, clergymen, postmasters, town authorities, or well-known citizens, concerning the above requirements, stating also how many children she has, and how many she has lost.

"The applications of women who offer to take charge of infants are made at the office of the Commissioners of Charities and Correction. The depot of the babies is at Randall's Island. The house-physician notifies an applicant to call for her boarder. She has to call personally. Travelling expenses are refunded. The board-money is ten dollars a month, to be paid semi-monthly, monthly, or bi-monthly.

"Besides, we offer to pay twenty dollars to a party with whom a boarder has been living for sixteen consecutive months, at the end of his second year.

"These are the outlines of the principal rules which, in all probability, will govern the farming out of infants in the country. We now apply to you, sir, and your friends, for your opinion and coöperation. You can ad-

vise us if, in your circle and neighborhood, the men in standing and authority, as mentioned above, would be found willing to help the cause of humanity and an enlightened political economy, by giving such certificates as parties would require, by even encouraging a party to serve herself and the public by taking charge of an infant, and also by paying a certain amount of attention to the little one who has no mother but the community.

"The general superintendence will have to rest with the medical board of the Infant Hospital. Their house-physician shall be entitled to provide for special inspection. Still, it will be of the utmost importance to interest the public at large in the welfare of the foundlings, particularly the ladies, who, according to localities, might form committees for the purpose of watching and superintending the foundlings and their nurses.

"You are respectfully requested to give the foregoing your attention, and to communicate to us your opinion as to the feasibility of our plans; whether, in your opinion, a certain number of women would be fit and willing to charge themselves with bringing up an abandoned infant in your neighborhood, and whether yourself or your friends, or their ladies, would be found willing, by occasional inspection, etc., to aid our attempts in raising infants, whose life is as valuable to society as our duties towards them are clear."

This letter has not been sent out, but is simply given as a contribution to the history of infant institutions in the city of New York, and the gradual improvement of the plan on which they must, in future, be raised. Your Committee takes a pleasure in stating, and hopes not to betray an official secret which it was not meant to be, that but lately an official connected with the bureau of public charities has been sent out into the country to ascertain to what extent the co-operation of physicians and authorities could be secured, and to learn the willingness of country people to take charge of little ones. It is known that this first attempt has proved far from unsatisfactory.*

According to the records of the Nursery and Child's Hospital, Lexington Avenue, corner of 51st street, New York, 117 babies were born in the lying-in department of that institution from October 1, 1870, to October 1, 1871. Of this number 69 were discharged within a short time after their births; most babies go out with their mothers within a few weeks, some remain a little while longer. The aggregate stay of the 69 little ones amounted to 108 months and 5 days. A month is always taken in our accounts as averaging 30 days; thus the average stay of each of the 69 amounts to 1 month and 17 days.

Our information on one of the rest is not positive. We do not know whether James McAlister has been discharged or died. We have not counted him among the dead. Of the other 47 babies, who were not so fortunate as to get discharged, 27 died. Their aggregate ages at the time of their deaths were 69 months, or 2 months and 17 days per head. We have no means of knowing how many of the discharged 69 would have succumbed, if they had averaged a stay at the institution of 2 months and 17 days, instead of 1 month and 17 days.

Of the 20 who remained alive within the Nursery after Oct. 1st, 1871, 9 have been born in the last quarter of the year; 5, viz., 20 per cent., in the very last month. They had not then averaged 2 months and 17 days.

We wish every practitioner of medicine present in this hall to compare his own experience and statistics among the rich and the poor, with these results obtained in the Nursery and Child's Hospital, where every one of the 47 has had its mother's, or, in some cases, nurse's milk. Of 47 new-born babies, 27 have died at the average age of 2 months 17 days, and half of the rest were not old enough to have reached this average.

You will now be prepared for some more figures.

Admission of Infants and Children to the Nursery and Child's Hospital, October 1, 1870, to October 1, 1871, between the ages of one day and nine years one month.

October,	1870	25,	with aggregate ages,	22	years	5	months,	23 days.
November,	"	22	"	35	"	11	"	27 "
December,	"	21	"	27	"	7	"	27 "
January,	1871	22	"	14	"	4	"	4 "
February,	"	18	"	23	"	4	"	26 "
March,	"	17	"	28	"	11	"	9 "
April,	"	21	"	30	"	10	"	8 "
May,	"	17	"	24	"	8	"	3 "
June,	"	19	"	37	"	0	"	3 "
July,	"	27	"	37	"	5	"	8 "
August,	"	26	"	43	"	1	"	25 "
September,	"	18	"	25	"	7	"	13 "
Total		253		361		9		26

Thus the average ages of 253 infants or children admitted in good health from October 1, 1870, to October 1, 1871, amounted to 1 year 5 months 16 days. We naturally lay stress on the fact of their health being good when they were admitted; for it is the rule of the institution that it should be so. This much is sure, that no child died this year 1871 of a disease contracted before it entered the nursery. Still, so great is the liability of the inmates to fall sick in the institution, that the secretary of the medical board publishes, in the annual report gotten up in 1870, the unnatural fact that 2,000 serious cases of sickness occurred in one year, among 377 admissions; and, in that of 1871, over 1,400 cases of sickness in 358 admissions.

* *P. S.*—In the minutes of the meeting of the Commissioners of Public Charities and Correction, held on May 23d, we find the following report of the house-physician of the Infants' Hospital, Randall's Island:

INFANTS' HOSPITAL, R. I., May 4, 1872.

ISAAC E. TAYLOR, M.D., Pres't Medical Board, Infants' Hospital:—

DEAR SIR.—Herewith please find the usual statistical tables for the month ending April 30, 1872.

The principal topic of interest connected with the experiences of the month has been the inauguration of the "farming out" system, so called. But it is well to bear in mind, at the outset, the fact that the plan as at present adopted by us is no fair test of what is popularly understood, at all events in Europe, as the farming-out system. This is evident, when I state, that all the children, with a single exception, thus far sent into the country, are walking children, and are above the age of from twenty months to two years. The results, however, even with this class of children, are thus far highly satisfactory. I have visited the children at their new homes several times, and have had further and more detailed information concerning them from my assistants, who have been detailed to make inquiry concerning them. And from all this, I am confident that the children are better off, in almost every respect, than when in the hospital. Now that the system is becoming known in the section where hitherto we have confined the boarding of the children (viz., Westchester county), there is an increasing disposition on the part of the inhabitants of that locality to assist us in the enterprise, and already I have had several applications to take young infants to board. I have but little doubt that we shall soon be able to secure good homes for quite a large number of infants of the class referred to. And, with this object in view, I have not sent out the entire number authorized by the Board of Commissioners, as I have preferred to reserve a few vacancies for this younger class. I am gratified to report that the physician (Dr. Weiss) whom I have employed to look after the children, has evinced a very decided interest in the project, and his services thus far have been of inestimable value to us in carrying the plan into operation. It is not a little surprising, too, to notice the interest of the German population in his district in the matter; and from my own personal observation I make no hesitation in saying, that in Westchester county alone, in the near vicinity of the town of Mt. Vernon, I could easily provide good and satisfactory homes for at least five hundred children above the age of say two years.—E. S. Dunster, M.D.

This is the first report on the first attempt at putting into operation a genuine boarding-out system. It looks favorable enough as far as it goes. The subsequent reports of the same gentleman are written in the same tenor, no diseases of any account having occurred, and no death amongst all of the boarded-out children having taken place for several months, although, after the first report had been published as above, a number of babies under a year were disposed of in the same manner. Repeatedly the Commissioners of Charities have expressed their utmost satisfaction at the result of what was formerly considered a hazardous experiment, and, by some, a ridiculous undertaking.

Of the 253 admitted from October 1, 1870, to October 1, 1871, 128 were discharged within a short time after their admission. We will presume they were all in good health when they left the institution.

	Discharges took place.	Aggregate stay, in days, at the Institution.
October, 1870	12	761
November, "	10	755
December, "	16	1,049
January, 1871	12	393
February, "	11	800
March, "	10	666
April, "	12	316
May, "	8	274
June, "	8	283
July, "	17	848
August, "	7	304
September, "	5	132
Total	128	6,581

Thus, the average residence of each of the 128, inside the Nursery, amounts to 1 month 21.4 days.

If you compare the enumerated discharges and admissions in the several months with the deaths, or if you will take the trouble to look over the records we have before us, you will reach the number of babies remaining alive in the institution:

	Admissions.	Discharged since.	Died since.	Remain alive.
In September, 1871	18	5	4	9
August, "	26	7	3	16
July, "	27	17	4	6
June, "	19	8	7	4
May, "	17	8	4	5
April, "	21	12	9	0
March, "	17	10	3	4
February, "	18	11	3	4
January, "	22	12	8	2
December, 1870	21	16	2	3
November, "	22	10	8	4
October, "	25	12	12	1

After all, there were 125 *bona-fide* inmates, who stayed more than the average of 1 month 21.4 days. Of these died:

		Years.	Months.	Days.
October, 1870	12 at aggregate ages	7	1	8
November, "	8 "	6	6	20
December, "	4 "	0	11	28
January, 1871	8 "	3	10	0
February, "	3 "	1	8	1
March, "	3 "	3	0	25
April, "	9 "	11	10	2
May, "	4 "	2	6	4
June, "	7 "	8	11	12
July, "	4 "	3	1	19
August, "	3 "	2	6	27
September, "	4 "	5	9	21
Total	69	58	00	17

Necessarily we must expect some more to die. Up to November 19th, 1871, one, who was admitted at the age of 1 year 3 months 21 days, died at the age of 1 year 7 months, on November 19th, of pneumonia. Thus, up to the date of November 19th, there were 70 deaths among 125 healthy children, admitted to the Nursery. The average age at the time of death was 10 months 7 days.

The causes of death are attributed, in one case each, to croup, pleuro-pneumonia, entero-colitis and peritonitis, measles, pneumonia and croup, scarlatina and croup, diarrhœa and broncho-pneumonia, pleuritis, intussusception, broncho-pneumonia, atelectasis (child of 11 months 4 days), pulmonary tubercle and pneumonia, measles and pneumonia, diphtheria, pulmonary tubercle—in 2 cases each, to marasmus, hypostatic pneumonia, measles and croup, cholera infantum, whooping-cough—in 3 cases each, to tuberculosis, atrophy, measles—in 4 each, to chronic diarrhœa and pneumonia, diarrhœa and pneumonia—in 6, diarrhœa, 10 chronic diarrhœa, 13 pneumonia.

Of these 70 deaths, 18 occurred in children over a year, 52 in such as were less than a year old. But 3 of the former children had been admitted before they were a year old: viz., 2 were admitted at 10 months; 1 at 11 months 18 days. They died when they were 1 year 2 days; 1 year 17 days; 1 year 2 months 7 days old. Thus we arrive at a sum of 55 deaths among babies, who were admitted before they were 12 months old. A large number of them had reached nearly that age at the time of their admission.

But how many babies were admitted under a year, of whom 55 could die within the short space of time reviewed in this retrospect?

Of the total of 253 admitted, 42 were over 3 years, 30 between 2 and 3, 44 from 1 to 2 years, together 116 over 1 year. Of these 116, 76 were discharged in a short time. Of the remaining 40, 15 (18 less 3) have died within this limited time—a percentage, for the time being, of 37.5 among children over a year, very many of them over 2 and 3 years, and all of them intrusted to the Nursery in perfect health.

Of the 135 admitted at less than a year, 52 were discharged after a short period; 83 were left in the Nursery as *bona-fide* inmates. Of these 83, the number of 55 died within the limited period which is the subject of this compilation. The aggregate ages of these 83 at their admission was 377 months; the average, 2 months 23.8 days.

Thus it results that the *mortality of babies intrusted in good health to the Nursery, at the age of nearly 3 months,* within this limited period, is 66.26 per cent.

The aggregate ages of the 55, at the time of their deaths, including those 3 who passed their first birthday while in the institution, count up to 26 years 11 months 1 day; the average age of each to 5 months 26 days. As their average admission took place at 2 months 23.8 days, they lasted 3 months and 2 days each in the institution.

Some questions submit themselves very readily:

1. What will happen to those who have reached, like the dead, the end of their sixth month by this time, and will stay in the institution to the full end of their first year? For the average ages of those 18 above mentioned, who were admitted before October 1, 1870, and died after my former report was made, amount to 10 months 6 days.

2. Was it fortunate, or not, for the 128 discharged children to stay but 51.4 days in the institution, as the time averaged between admission and death is 3 months 2 days?

3. What is likely to become of the 20 living babies born in the place, and remaining at the present time in the institution, provided their stay is extended to the end of their first year? On the 20th of November their average life was a trifle more than six months, and up to that period 27 out of 47 (57.45 per cent.) had died.

4. If 66¼ per cent. perish among healthy infants admitted, as those of the Nursery, at an average age of two months 23.8 days, what would be the percentage if the babies were admitted at birth, under the same circumstances?

To facilitate the answer to this latter question, I beg to compare the following facts:

Of 100 newly-born infants died in

	Belgium, 1840–50.	Holland, 1848–53.	Austria, 1851.	Sardinia, 1823–37.	France, 1853.
0– 1 month	5.18	4.70	10.96	11.14	6.60
1– 2 months	1.76	2.29	2.55	1.87	2.85
2– 3 "	1.27	2.09	1.96	1.43	
3– 4 "	1.08	1.91			
4– 5 "	0.86	1.48	3.42	2.51	2.39
5– 6 "	0.76	1.19			
6– 7 "	0.72	1.77			
7– 8 "	0.66				
8– 9 "	0.66	1.42	2.40		
9–10 "	0.65			4.89	3.15
10–11 "	0.63	1.29	2.78		
11–12 "	0.80				
0–1 year	15.03	18.14	24.07	21.84	14.99

From this table, which has been taken from official documents, it is evident that the mortality of babies who have reached the end of their first quarter is but one-third or one-sixth, for each following quarter, of what it would be from the first hour to the end of the third month of life. It appears, then, that the admissions at the Nursery and Child's Hospital take place at an average age when the principal danger to life is passed already. Still, it is, in a limited period, 66.6 per cent.

We think we might go on *ad infinitum* with the practical conclusions. We want to draw but one conclusion, viz., *that the attempt to raise babies in great institutions, even with large means to aid you, cannot be justified; that these institutions must be given up, and reserved for other purposes, and that the only system worthy of being sustained is, to place the children out with private parties.*

We claim that the preceding figures are correct, and our conclusions warranted by facts as given above. We also claim that our report as herewith presented was ordered by you, and written by your Committee, for the purpose of arriving at the truth, and not of satisfying any personal ends. We have not forgotten that it is undignified and low to regard personal motives and ends as anything in comparison with the requirements and necessities of society and the dictates of justice. Therefore we were of the opinion that we had to deal with institutions, not with persons; with principles, and not with individuals. The names and persons of those who superintend the several institutions spoken of, are of no account to you or to your Committee. *If the best names of the land were at the head of the government of the country or an institution, they would be liable to make mistakes, and to see their best efforts thwarted* BY A FAULTY SYSTEM. *Not to fight systems and principles which are found to be wrong and to work badly, is the domain of those who are too lazy to think, too cowardly to disagree, too menial to resist those in power.* If there were no thoughtful, courageous, and self-denying members of society, there would be no safeguard against social iniquity, misrule, and despotism.

It is with deep sorrow, therefore, that we have to record the fact that plain statements have been answered by insults, search for truth by calumnies. You will be astonished to read the following editorial, published but a few days ago, in one of the great New York daily papers:*

"ASYLUMS FOR INFANTS.

"The *Post* has blundered. It commends to the Legislature the opinions of Dr. Jacobi, who happens to be President of the Medical Society of New York, as worthy their attention. Dr. Jacobi was put out of the Nursery and Child's Hospital for misbehavior, personal and professional, if not malpractice. He has crammed his inaugural address with diatribes and false statistics and misrepresentations of the institution in which he was not permitted to act as a physician. He does not discuss the general topic, which deserves discussion, whether a child's hospital should be kept at a minimum number and as large a part as possible to be distributed in private families or small and widely separated houses under hospital management. He merely rants. He makes no comparison of the results at the Foundling Hospital, the Nursery, and the public institutions on the island—which is probably accounted for by his 'vast researches during several trips to Europe'—and he comes to the sapient conclusion that these institutions must be given up, and that 'the only system is to place the children out with private parties.' The problem is far from such easy solution. His readers, if so much spleen and malice can procure him readers, will not forget how England rang from one end to the other but a few weeks ago with denunciations of the horrors and the apparently irremediable abuses of this very system which Jacobi, M.D., has judged to be 'the only system' ever since he was put down the steps of the Nursery and Child's Hospital."

We have good reasons to believe that the writer of this indecent and shameless attack will be sorry for it before long, when he studies the sources from which his "information" was obtained. The history of Dr. Jacobi's "expulsion" from the medical staff of the Nursery and Child's Hospital is known to the medical profession from the reports published by medical journals. The "horrors of this very system" (?) with "the denunciations of which all England rang from one end to the other" consist in a newspaper report concerning a single criminal woman who made a business of starving and destroying a dozen babies at a time; and the chronology of some of the above statements is rather erroneous, when we remember that Dr. Jacobi's report, ordered and printed by the Commissioners of Public Charities and Correction, was written and read in a meeting of the Medical Board of the Infant Hospital—George T. Elliot, President—and published nine months before the connection of Dr. Jacobi with the Nursery and Child's Hospital was put to an end. As "false statistics and misrepresentations" are imputed, however, we take the liberty of laying before you a few of the monthly records of the Nursery and Child's Hospital, in order to satisfy all whom it may concern, of the manner in which your committee has done its duty, and of the genuineness of our sources, which we should be glad to verify by an *official and impartial investigation:*

After all, your Committee would not lay too much stress on all the expressions of large daily papers, or other papers or journals, which are apt to be influenced by personal regard for interested individuals. Those who have personal ends to look after, will avail themselves of all the facilities and influences within their reach, of personal connections; those, however, who work in the service of a principle and truth, have no time or labor to waste. Thus the battle between personal ambition and prerogative on the one hand, and the seekers after truth on the other, is always a protracted one. Still, we trust that the labor in which you are engaged will not be lost. Many of the public papers have now and then, though cursorily, paid some attention to the subject of your research, as soon as they obtained a knowledge of its being instituted. As an example we quote a part of an editorial from another New York daily:

* *The World*, Feb. 4th, 1872.

Admissions to the Nursery and Child's Hospital (deaths known until Nov., 1871, only).

October, 1870.

Names.	Age at Admission. Yrs.	Mos.	Days.	Age at Discharge. Yrs.	Mos.	Days.	Age at Death. Yrs.	Mos.	Days.	Diagnosis.
Ida Sampson	2	3		2	3	11				
James McLean		2			3	11				
J. E. MacMahon	1	1					1	1	27	Chronic diarrhœa and pneumonia.
J. W. Malloy		1	12					10	15	Rubeola.
Emma Johnson		4						10		Pneumonia.
Hester Lynch	2	5		2	7	21				
Edward Adams	1			1	2					
Mary Jane Jarvis		2						6	14	Pneumonia.
Harry Lee			14		1	2				
Thomas Whitaker	2	6		2	6	12				
Mary Ann Maher			26		4	10				
Walter Leonard	1	7		1	11	18				
Alma Petterson			13						17	Pneumonia.
Ada Call		1						9		Pulmonary tubercle.
John Chard	5			5	0	24				
Wm. H. Smith			28					3		Diphtheria.
Edward Dolan		11								
Frank Hallenbeck		1	12					9	6	Pneumonia, rubeola, etc.
Annie Miller		6						7	21	Pneumonia.
Margaret Morris		5						5	9	Diarrhœa.
Gustave Dury		1	19					8		Pulmonary tubercle and pneumonia.
James Haughery	1	9		2						
Henry Eastman			21			23				
Michael Clark	1	6		2						
Ellen M. Kellgren		1						1	19	Pneumonia, diarrhœa, etc.

November, 1870.

Names.	Age at Admission. Yrs.	Mos.	Days.	Age at Discharge. Yrs.	Mos.	Days.	Age at Death. Yrs.	Mos.	Days.	Diagnosis.
Carrie Wall	3	6								
William Bottomley	1	5					1	5	18	Pneumonia.
Ernestine Friend	1	8		2						
Lizzie Smith		6								
Moses Wertberger	7			7	8					
Carl Begert	1	8								
James McComb	1	9		1	10	3				
Eliza Krentz			14					8		Diarrhœa.
Joseph Connors	2	7		2	7	3				
Emil Koenigberg	1			1		21				
Mary Smith		6						11	4	Atelectasis.
Matilda Lauffen	3	5		3	6	14				
Joseph Fletcher	3	6								
Annetie Schwan	3	6		3	7					
Mary Kreuse			13					11		Pertussis.
Jabo Besancon		9						9	25	Pneumonia.
Frederick Vogel		2						10		Chronic Diarrhœa.
William Lee		2			2	24				
Augusta Funenberg		5			6					
Thomas Ramsbotham	1	10		2	5					
Albert Nellis		4						5	15	Broncho-pneumonia.
James Brady		3						5	18	Pneumonia.

Children who died between Oct. 1, 1870, and Oct. 1, 1871, but were admitted previous to Oct. 1, 1870.

Names.	Age at Admission. Yrs.	Mos.	Days.	Age at Death. Yrs.	Mos.	Days.	Diagnosis.
Henry Bidere			21		2		Diarrhœa.
Ada Murphy		7			7	12	Tuberculosis.
Herbert Charles		2	6		7	18	Diarrhœa and pneumonia.
John J. Kelley			21		4	5	Pneumonia and cholera infantum.
Edward Walsh	1			1	1	14	Diarrhœa and pneumonia.
Sallie Kreunthall			29		8	12	Chronic pneumonia.
Mary Murphy			21	1		24	Pneumonia.
John Read		1	15		9	19	Marasmus.
Helena Anderson			14		9	4	Pneumonia.
Michael Bracken	1	10		3	3	13	Rubeola and cancrum oris.
Mary Jackson			10	1	6	13	Rubeola.
Cornelius Lindsay			15		6	13	Diarrhœa and pneumonia.
Eugene Pady					2	10	Chronic diarrhœa.
Dehlia Kusick			18		4		Capillary bronchitis.
Sydney Rankin			14		4	17	Pneumonia.
Mary Kingsley					6		Entero-colitis.
Nellie Callaghan	1	2	16	1	6		Chronic diarrhœa.
Emma Myers					10	15	Diarrhœa and bronchitis.

"Probably no one will doubt that the motives of the good people who have interested themselves in the Child's Hospital are pure, generous, and praiseworthy. But it is evident that there must be carelessness, a lack of administrative ability, or worse faults, somewhere, or we should witness more favorable results from the zealous charitable efforts which appear to have been in some manner misdirected in these quarters. And when two institutions, which have been so highly esteemed as these, are found to be in so unsatisfactory a condition, it is discouraging to think how many serious abuses a strict scrutiny into the affairs of all our charitable institutions would be likely to reveal. There are many people who in the name of charity labor industriously for the attainment of selfish ends, and such persons seldom fail of enlisting the aid of well-meaning people in their plausible schemes. We fear that a thorough investigation into the affairs of all our charitable enterprises might bring to light many projects for self-aggrandizement at the expense of the generous and the poor. The subject is an unpleasant one, but none the less deserves the attention of those who are responsible for the honest and judicious expenditure of the vast sums annually contributed in this city for the benefit of the suffering and needy."

And now let us, for a moment, examine into the expenses of large institutions like the Nursery and Child's Hospital.

On p. 12 of the "Seventeenth Annual Report of the Nursery and Child's Hospital, in the City of New York, Fifty-first Street, corner of Lexington Avenue, March 1st, 1871," under the heading of "Financial Report," you will find the expenses between March 1, 1870, and March 1, 1871, laid down at a little more than $75,000. Of these I deduct at once $30,000 for "temporary investment," "part purchase of country hospital," and "furnishing and support of country hospital." Balance, $45,000. As repairs and insurance are counted up with more than $4,000, I estimate the rent of the immense buildings at $20,000 only. Thus I take $65,000 as a fair, or rather low, average estimate of the whole sum spent for the benefit and support of 253 admitted children, and 117 lying-in women with their infants. *They are the only beneficiaries*, for the mothers taken in with, or in behalf of, their nurslings, and the wet-nurses, cannot be counted in this class, any more than the matron, the ward nurses, or the domestics. It may be interesting to know, at this point, that of $45,000, the house inmates paid about $12,000, the treasuries of the State and other authorities $24,000, and private subscriptions and donations amounted to little more than $1,700. The balance was made up by the receipts of the great Charity Ball.

Those beneficiaries did not stay in the institution through the whole year, but a very small part of it only. The aggregate say of the new-born, who were soon discharged, amounts to 8 years; those 27 who died at the average ages of 2 months 17 days, to 6 years; those 20 who remain after the close of the year (October, 1870, to October, 1871), to 8 years. The aggregate stay of the 128 children who were admitted and soon discharged, to 18 years; of the 125 who are dead or still alive, to 60 years. Total, 100 years. The aggregate stay of the pregnant women who were confined in the institution may be set down at 20 years. Thus $45,000, without rent, or $65,000, rent included, are spent on *a year's board* of 100 children (the new-born included) and 20 adults. Said board averaging the sum of about $400, rent not included.

How nearly correct this estimate is, we find corroborated by the fact that the sum of about $12,000 is credited as "house income" in this year's financial report. Our summing up would average a yearly board paid by the inmates of $100, or a monthly one of about $8.00, which is almost the very figure (a little less) of the average board paid to the institution by the inmates.

While we remind our readers of the fact that our figures cover the time from October, 1870, to 1871, and the report alluded to, the time from March, 1870, to March, 1871, and that, therefore, trifling differences may be found, you will still find a few of the items in the expenses highly interesting.

The 120 annual boards required in round numbers: $25.000 for provisions; wages amounted to $4,000; stationery, printing, and collecting (of $1,195 "subscriptions," I suppose) to $625: wine, brandy, drugs, and surgical instruments, $1,800. After all, you discover that, *besides* subscriptions, donations, payments of inmates, and proceeds of charity ball, the treasuries of the people of the State of New York pay alone 30 per cent. more than the rate of sustaining the infants under the charge of the Commissioners of Charities and Correction, and you will, we hope, agree with us in our conclusion that the State, that society, can work at a cheaper rate, and on a more uniform plan, than the dozens of self-constituted authorities. Altogether, you will find that the total cost of sustaining the infants of the Nursery and Child's Hospital amounts to more than treble the expense of the Commissioners for the same purpose*. We wish we could say that their successes were double as to general care, good food, clean wards, and mortality. Unfortunately the high standards of food, wards, and mortality are undeniable.

Let, however, these figures suffice. He whom they have not yet convinced of the truth of our statement, that large institutions, no matter what their means are, will destroy their infant inmates, may perhaps change his mind on still further investigation. At all events, it will prove a difficult task to trace the fearful mortality of the institution we have spoken of, to radical faults in the manner in which it is conducted. We do not think there are many shortcomings in the administration of that institution, which will not be found in all carried on upon the faulty principle of accumulating large numbers of infants under one roof. Still, it must be said that institutions under dozens of managers labor under unusual difficulties—never thrive well. There is always something meddlesome, fidgety, inconsistent, incongruous, in large numbers; nor is the transaction of business by a ring, if we are well informed, cheap or

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* In the minutes of the meetings of the Commissioners of Charities and Correction we read the following:

Resolved, That the estimates of Doctor E. S. Dunster, Resident Physician of the Infants' Hospital, under date of 20th May, 1872, and of William H. Stephens, Warden of Randall's Island Nurseries, under date of May 16, 1872, be adopted by this board, as the fair and equitable estimate of the care and provision of Infants, per week each, in the Infants' Hospital; and the cost for maintenance and hospital care of each child, over the age of eighteen months, *per year*, in the Nursery for Children on Randall's Island, and that certificates of such estimates, signed by the Secretary of this Board, be transmitted to the Trustees of the Foundling Asylum of the Sisters of Charity, in the City of New York, and to the Trustees of the New York Infant Asylum, as provided by Chap. 635 and 263 of the Laws of 1872. August 2, 1871. Adopted.

DEPARTMENT OF PUBLIC CHARITIES AND CORRECTION.
August 2, 1872.

In conformity with the Resolution adopted this day, by the Board of Commissioners of Public Charities and Correction and herewith transmitted:

I hereby certify, that the sum of One Dollar and seventy-two and one-tenth cents ($1.72 1-10), is a fair and equitable estimate for the care and provision of Infants, *per week*, each, in the Infants' Hospital, and the sum of seventy-nine dollars and fifty-one and eight-tenth cents ($79.51 8-10), as the cost for maintenance and hospital care, for each child, over the age of eighteen months, *per year*, in the Nursery for Children, on Randall's Island.

JOSHUA PHILLIPS, Sec'y.

expedient; nor can we presume that, where less special knowledge than ambition and theoretical love is brought to bear upon a serious task, like that of conducting an infant asylum, the results are surprisingly favorable. We say "theoretical love," for, where a board of several dozen of managers in New York City cannot command more than seventeen hundred dollars' worth of "subscriptions and donations," we dare say that love requires more practical illustration.

Old Homer says that a government of many heads does no good. He wants one master. Perhaps he thought of infant asylums. The improvements effected in the management and mortality of the Infant Hospital (Randall's Island) by the intelligent administration of a single medical officer with his subordinates, under the control and in the pay of the Commissioners of Public Charities and Correction, speak for the advantages of special knowledge and a uniform plan.

Let us then again urge the fact that large infant asylums will destroy children.

When this fact became known, many experiments were made of distributing infants over a number of places—the so-called cottage system. Six, ten, twelve, were kept in a small separate institution. The disadvantages are plain. The increased number of households raises the expenses, the difficulty of obtaining wet-nurses increases, control and medical attendance become more and more difficult. The cottage is, in fact, not much, if at all, better than a ward in a public institution.

What, then, is left but to board out the infants in the country? For, common-sense, hygienic principles, and statistics, point to the country as the residence of the children of the Commonwealth. When this conclusion shall be the conviction of all, the necessary steps will be taken, no matter how great the difficulties may be. With us they are not small.

Our population adjoining the great cities, especially New York, is not so large as in Europe, and is not so poor. It is not of such vital importance for a country family to avail themselves of the trifling subsidy paid for the infant boarder. But there are some considerations which are to be taken into account. The first is, that the infants we have to care for do not count by six or ten thousand every year; and the second, that the sum which is at present spent for every infant under the charge of the Commissioners of Charities is by no means a trifle, and, under the Managers of the Nursery and Child's Hospital, enormous. It would be found, on trying, that the apparent difficulties in procuring proper country homes for our infants would by no means be so great as they may appear at first sight. Even if there were some in the beginning, we should always gain.

The question whether it would be desirable to leave, if possible, the young illegitimate child in charge of its mother, cannot be answered in a manner uniformly adapted to every case. The facts exhibited by the Munich records, according to which the children reared by their own mothers have a fearfully larger mortality than those intrusted to strangers, do not look encouraging. In our city, I am afraid that many of our unmarried mothers would not prove excellent nurses. Still, the fact of their being sufficiently supported might change the circumstances, and yield better results than the following lists, comprising the numbers of all the infants and children up to 14 years, in Munich, under official charge. Part of them are given in charge to parties under constant supervision of the proper officers. Part are in the care of their (illegitimate) mothers or grandmothers.

	Total No.	This year's increase.	With strangers.	Died.	With their mothers or grandmothers.	Died.
1860-61.	10,987	1,931	4,124	261	6,863	778
1861-62.	11,290	2,161	4,257	287	6,993	876
1862.	11,797	2,513	4,796	292	7,071	983
1863.	12,292	3,068	5,135	287	7,157	1,117
1864.	12,980	3,736	5,815	251	7,165	1,188
1865.	13,967	4,040	6,119	185	7,848	1,228
1866.	14,490	4,293	6,272	187	8,218	1,111
1867.	14,967	4,529	6,418	170	8,549	1,123

Thus the mortality of illegitimate children, in percentage, up to the 14th year, the surviving being counted again in every consecutive year, is the following:

	With mothers and grandmothers.	With strangers.	Total.
1860.	11 per cent.	6	9
1861.	12.5	6.4	10
1862.	14	6	11
1863.	15.6	5.6	11.4
1864.	16.6	4.3	11
1865.	15.6	3	10
1866.	13.4	3	8.9
1867.	13	3	8.9

Thus the mortality of illegitimate children in Munich from the day of their birth to their 14th year, is three times as large when they are left in the care of their mothers and relatives as when they are given in charge of strangers and remain under official supervision.

There is another consideration not to be lost sight of. Unfavorable though all circumstances be within the walls of an institution, mortality can be reduced by procuring paid wet-nurses for the same. We know that our nursed infants thrive much better than the bottle-fed. But no breast-milk is obtained except from those who have no home, the poorest and most miserable. No married woman, as a rule, at least none who has the slightest means of escaping the discipline of and submission to institution rules, will ever consent to become a wet-nurse to any of our children. Thus we have to take either the sickly or profligate, the very poor, or consider ourselves very fortunate when we succeed in securing the own mother's breast for the support of the infant. Many mothers, however, who have a home in the country, have lost a young baby, or have milk enough left, after weaning, to nurse, or enough to nurse two, but who would never consent to leave their husbands and children, could be induced to take charge of an infant. A careful comparison of the direct expenses of the two modes of rearing infants, out of, and in asylums, in Europe, has proved that even there no pecuniary loss is incurred by the more advantageous and humane proceeding.

Besides, the nurses necessary for the infants in institutions are just so many nurses kept out of the service of the general public. In New York city, wet-nurses are scarce, since the humane efforts of the Commissioners of Charity, and the Catholic Foundling Institution, have been directed to the task of supplying our foundlings with human milk. Thus it is very probable that what society gains on one side, in the saving of the destitute and poor, is lost among the public in general. At all events, such element of proper food as is accessible at its own home only, that is, breast-milk of the country-women, is left unavailable and unused.

If not absolutely necessary, no attempts at obtaining breast-milk ought to be made within the limits of the city. Besides the other damaging influences of city life and city atmosphere, which alone destroys so many infants' lives, the experience of former times, of boarding the city's infants within the boundaries of the city, has been very unfavorable.

It is not our intention to go into the particulars of administration at this moment. Still, we beg the privilege of pointing out a mode of action which in some parts may prove faulty, but which, under our

circumstances will, in our opinion, prove sufficiently correct to enlist sympathy or bring out a discussion.

Before so doing we again refer to our opinion on the responsibilities and duties, and the rights, of the State. The whole administration of the foundlings ought to be controlled by the Commonwealth. Private or sectarian establishments ought to be under governmental supervision; ought not to be supported or aided by the State, but not interfered with so long as their successes and general management appear satisfactory; the department of the foundlings to be centred in one office; the necessary appointments of the head or heads to be made by the Governor of the State.

The expense of boarding the foundlings to be borne by the people of the State of New York.

By concentrating the administration, the running expenses would be but small in proportion. New York City would have a single depot for the abandoned children, from which speedy distributions would take place. The large buildings at present dedicated to the purpose of raising infants would soon be required for those children who would be returned from the country, after reaching the age of 3 or 5 years. Some might become hospitals—we have no child's hospital in New York City—some schools and asylums for the older children of the community, where they would be taught to become useful citizens of the republic.

We assume a mortality in the first year, say, of 25 or 30 per cent. of infants abandoned in their first year. After that time, the mortality will become small. Of 1,000 abandoned infants 750 or 700 must reach in future their twelfth month. We assume $150, the amount spent by the Commissioners of Charities and Correction, to be a fair average for yearly board, clothing, etc. Thus 1,000 abandoned infants would cost the State per annum, say $120,000. The 3,000 lives endangered or thrown away every year might cost us $350,000 yearly; but then we should certainly succeed in saving most of them, at a proportionately small expense, and educating those many who have been saved.

The question concerning the best mode of disposing of the children who have reached their sixth year, or the end of their sixth year, must be answered on the strength of the following considerations. The mortality of early age has closed by this time, it being ten times less between the sixth and fourteenth year than what it has been from birth to the sixth year. Therefore there is but little danger in recalling the children from their temporary homes in the country. Experience has taught, and statistics prove, that mortality in public institutions in that period of life is not large. The reasons are evident. The children are active, their occupation is divided between playing, learning, and light work. They are changing about between the play-grounds, dining-rooms, school-rooms, work-rooms, and bed-rooms. Ventilation, therefore, and a full supply of air are rendered easy. Thus not even the customary requirements of a certain number of cubic feet per head will hold good for institutions of that kind, less space being necessary than in hospitals. Thus there is no doubt that the children of that age may be removed from the country to be transferred to their common city homes.

But there is more than the mere admissibility of uniting the children in an institution, refuge, or orphan asylum. It appears that such a step is advisable, and may become necessary. At the age we speak of, the child requires further education and schooling, unless the sad results of neglected education, such as we have spoken of in regard to the French foundlings, are expected to be encountered in later life. The infant and young child had everything it needed in the pure atmosphere of the country, and at breast or cows' milk diet. But schooling cannot be supplied at will, and even this will does not always exist. Even in the immediate neighborhood of large cities school education is neglected with a part of the population, and as it is not compulsory with us, it is more than probable that in very many cases of our foundlings it would be neglected. Moreover, that very period of life is the one in which the children may be made useful for work, adapted and not, to their age. There is some reason to fear that the children entrusted to the care of strangers would sometimes be overworked, and become unhealthy and crippled. Thus the results of the former years care and attention might in many cases be endangered again by the carelessness or avariciousness of the parties concerned. The temptation, it must be feared, would be too great for them, in some instances.

Thus it appears, that while the earliest period of life requires farming-out to private parties in the country, the more advanced age might be more benefited by education in larger institutions. The mode of their management may differ in many respects. There may be a difference of opinion regarding the choice of small or large institutions. Some are in favor of uniting a limited number of children under the superintendence of a teacher who, at the same time, is the superior of the common household. Some, however, favor large institutions. This much is certain, that whatever plan is followed concerning the education of children after their sixth year, the recalling them from the country homes ought to be considered as preferable to their remaining in their seclusion, whenever there is a possibility of occasional neglect. Experience will show whether such neglect is to be feared, however. Mr. Anderson's results speak certainly in favor of allowing the children to remain in their country homes; and Samuel B. Howe, in an address delivered at the ceremony of laying the corner-stone of the New York State Institution for the Blind, Sept., 1866, when speaking of the comparative value of large institutions and private homes (not for the blind only), says: "All great establishments in the nature of boarding-schools, where the sexes must be separated; where there must be boarding in common and sleeping in congregate dormitories; where there must be routine and formality, and restraint and repression of individuality; where the charms and refining influences of the true family relation cannot be had,—all such institutions are unnatural, undesirable, and very liable to abuse. We should have as few of them as is possible, and those few should be kept as small as possible. . . . . We should be cautious about establishing artificial communities, or those approaching them in character, for any children and youth."

But "when two do the same, it is not the same;" and therefore, we are not prepared to recommend a uniform rule and advice in every individual case. The character of the foster-parents, the distance from the nearest school-house, etc., are just as many points requiring consideration.

CONCLUSIONS.

In accordance with the facts and conclusions contained in this report, which we have the honor of presenting to the Medical Society of the State of New York, we desire to propose the following:

That the life and health of every infant is, botheconomically and morally, of paramount importance to society and to the commonwealth:

That it is the duty of society and of the State to grant every infant the possibility of living and obtaining an education:

That it can under no circumstances free itself of its responsibilities by throwing them upon private individuals; but should take charge of every infant deprived of its parental protectors by death or incompetency:

That science and experience have united on certain principles to be observed in the raising of the young:

That human breast-milk is more appropriate than artificial food; the country more wholesome than a large city; and an inferior private dwelling better adapted than a large, over-crowded institution, to the raising of an infant:

That the practice of uniting lying-in asylums with infant asylums or hospitals is a direct source of dangerous disease, and fearful mortality:

That the accumulation of many infants under one roof, under the best possible circumstances, and with as gentle care as is observed in New York State and City, is conducive to ill-health and unavoidable mortality; this system having been given up in Europe for this very reason:

That, according to the statistics of our own large infant asylums, especially the Infant Hospital, under the charge of the Commissioners of Public Charities and Correction; the Catholic Foundling Asylum, under the charge of the Sisters of Charity; and the Nursery and Child's Hospital, under the charge of a Board of lady managers—all in New York City—their infant mortality is immense, and equal to the mortality of the large foundling hospitals of Europe before a radical change in their system of management was instituted:

That the necessity of distributing abandoned infants among private families, especially in the country, is urgent:

That the Medical Society of this State recommend such a change in the manner of caring for abandoned infants:

That the State should see that this change be made as speedily and fully as possible, by all the public and self-constituted authorities concerned in the care of foundlings; inasmuch as it has positive responsibilities towards every member of society in general and the young and feeble in particular:

That, however, the State should not interfere with private charity towards foundlings, so long as the interests of the infants and the Commonwealth are not injured:

That the State ought not to be held responsible for expenditures not incurred by itself nor under its own control; that private charitable societies should not assume duties beyond their own means; and, in particular, that, while private charity and enterprise must be encouraged, private ambition and officiousness must not be indulged in at the expense of the taxpayers:

That therefore, when private individuals or corporations ask the Commonwealth for permission to administer charity on a large scale, under the rules and regulations of a charter, this permission and charter does not involve that the State should be tributary to such individuals or corporations:

That, as medical men and citizens of the republic, we are of the opinion that the maintenance of large institutions for the care of foundlings, by the payment to them by the State of eight dollars per head per month, is not productive of good results:

That the probability, or possibility, of frequent changes in the administration of such institutions, which are, moreover, liable to be placed under the charge of persons whose qualifications for the solution of questions of the greatest difficulty and importance is frequently doubtful, is a source of great danger to both the infants and to the Commonwealth:

That the supervision and control of all the abandoned infants of the State belongs alone to the State; no matter whether they are sustained by the State, or by private individuals or corporations:

That we see in such supervision and control no unrepublican centralization, but the performance of a duty of the Commonwealth towards the feeble and dependent young.

Progress of Medical Science.

Atlo-Axial Disease.—J. T. Rothrock, M.D., of Wilkesbarre, Pa. (*Philadelphia Medical Times*, October 19, 1872), has had a case under his observation of this somewhat rare disease. Small pieces of bone escaped from the openings beneath the fungoid granulations in the posterior wall of the pharynx. The shape and character of the fragments confirmed his previous conclusions in regard to the diagnosis. In one case it could be no other than the polished surface of the atlas, against which the anterior portion of the odontoid process rubs. In regard to treatment, in addition to the supporting regimen, he maintained pretty constantly a mild counter-irritation over the back of the neck. He hazards no opinion as to the permanency of the cure, as this depends on so many contingencies.

Bleached Tincture of Iodine.—It is said that the sulphite of soda will discolor iodine and yet increase its effect. The *Med. Press and Circular* gives a formula for the combination, *viz.*: Tincture of Iodine; Glycerine, pure, āā. ℥j; Sulphite of Soda ʒj; M. Rub the salt to a powder in a small mortar, and add the glycerine gradually; then pour in the tincture, and triturate gently until a solution is effected and the mixture assumes an amber color.

Removal of Inverted Uterus by Ligature.—At the last meeting of the *British Med. Association*, Mr. Henry Horton mentioned a case of this nature, in which inversion of the uterus had existed for two years and had been treated as one of polypus. At each menstrual period the woman has suffered from profuse hæmorrhage. After a careful examination, which revealed the nature of the trouble, a ligature was applied, the inverted uterus was removed, and not a single unfavorable symptom followed. The patient was soon able to walk, perform her household duties, and enjoy her existence in a way that she had considered beyond hope.

Treatment of Catarrh of the Lachrymal Sac.—Dr. Verneuil, of the Lariboisiere hospital, believing that lachrymal fistula is due to inflammation of the walls of the sac, and not to the structure of the nasal canal, discards the use of mild injections and catheterism of the lachrymal duct as being almost useless, and employs injections of iodine as follows: Puncturing the tumor, when it exists, by means of the needle of an aspirator, he withdraws its contents and injects the iodine at once, leaving the needle in the puncture, while the syringe is unscrewed to be emptied of pus and filled with the injection. Care needs to be taken not to force the injection through the *puncta lachrymalæ*, since it would produce inflammation of the conjunction. When the fistula already exists, and the disease is old, Dr. Verneuil destroys the sac by means of butter of antimony, which is introduced into the sac through a quill after the sac has been properly cleaned. The quill is stopped with cotton wool, and allowed to remain *in situ* for about twelve hours. Subsequently an eschar separates and the wound fills by granulation.—*Journal de Méd. et de Chir. Prat.*

Carbazotate of Ammonia in Place of Sulphate of Quinine.—Dr. Dujardin-Beaumetz recently reported to the *Société de Thérapeautique de Paris* his investigation of the character of this combination of ammonia with carbazotic, picric, or trinitrophenic acid, and especially with reference to its use as a substitute for sulphate of quinine. After mentioning the successful employment of this salt in the treatment of intermittent fever by several persons, Dr. Beaumetz detailed six cases treated with like result by himself, and also mentioned the results of experiments made upon both men and animals. Like quinine, carbazotate of ammonia diminishes the strength of the pulse and induces languor, cephalalgia, and even delirium, and finally is elimininated by the kidneys. The clinical results may be summed up as follows: Case 1.—Quotidian ague, recovered after four days of treatment; daily dose from one to two centigrammes of the substance in pills. Case 2.—Quotidian ague (sulphate of quinine having been given without effect); complete recovery after five days; five pills used. Case 3.—Tertian ague; recovery after eight days; two pills daily. Case 4.—Quotidian ague; recovery after eight days. Case 5.—Facial neuralgia; speedy recovery. Case 6.—Tertian ague; sulphate of quinine had been administered during seventeen days without result; completely cured after the administration of about one grain of the salt, extended over the period of two days.

The Doctor thinks that one-third to two-thirds of a grain daily will suffice to suppress the paroxysms of intermittent fever, and says that, given in these doses, the drug has not been known to produce bad effects; indeed, it seems to be better tolerated than sulphate of quinine, the physiological action of which it resembles.

Endo-follicular Condyloma.—Spengler of Augsburg describes a severe case of what has been known as subcutaneous condyloma. It appears on the skin, especially of the genitals, as broad, flattened prominences of a rosy color, marked at the apex by dark points, the orifices of sebiparous glands. In this case he observed an active growth of connective tissue pushing into the base of the follicle from beneath, but forming no connection with the follicular walls.

The contents, principally fatty matter, were pressed out by the finger; the excrescences were then extirpated and a satisfactory cure accomplished.

Zeissl mentions these growths as occurring on the thighs, and observes that they may occur either alone or in conjunction with the condylomata acuminata, and are frequently developed after forced sweating.—*Aerztl. Int. Bl., No.* 37, 1871.

Hæmorrhoidal Tumors of the Female Urethra.—The *Journal de Méd. et de Chir. Pratique*, contains an article by M. Richet, on this affection, in which this gentleman calls attention to the fact that many of the painful tumors found in this locality are hæmorrhoidal, and not, as is sometimes supposed, polypoid growths from the mucous membrane. The galvanic cautery and forcible dilatation are spoken of as the most successful modes of treatment.

Treatment of Uterine Hæmorrhage by Sulphate of Quinine.—M.M. Gueneau de Mursy and Bartheg, have resorted, for several years past, to the use of this remedy in the treatment of metrorrhagia, with marked success. It is principally in hæmorrhages which occur several days after delivery, and are accompanied by fever, with daily exacerbations, that they have found its use to be of most value, and in several cases it has given relief, when used as a *dernier resort*, after ergot and other hæmostatics had failed.

In order to obtain the desired results, it is necessary to give the remedy in sufficiently large doses. The gentlemen above mentioned have used it at the rate of eight grains every two hours. Sometimes it is not necessary to continue the remedy beyond a single day, but it is generally prudent to continue it for several days; even though the hæmorrhage should have ceased.

Influence exerted by the Silicate, and the Biborate of Soda, upon Fermentation.—M.M. Rabuteau and Papillon recently published an article in *La Liberté* on the effect of the former substance in arresting fermentation, and M. Dumas, in commenting upon it, spoke of some recent experiments of his own with borax, which he finds possessed of the same property. Both of these salts arrest the fermentation of wort, wine, urine, milk, almonds, etc., by destroying the organisms which cause changes. M. Dumas thinks that this property may be made serviceable in the treatment of some infectious and parasitic maladies.

M. Vulpian on the Regeneration of Nerves.—M. Vulpian recently communicated to the Société de Biologie some new observations on the mode of regeneration of nerves. There exist two theories on this subject: Whether there is a new embryonal formation of nerve tubules in the altered nerve-trunks; or if there takes place a restoration of myeline cylinders in the ancient sheaths of Schwann, which, as is known, together with the axis cylinder, persist in the altered nerves. After the section of a nerve these sheaths are filled with granulations and with granular bodies, and five or six weeks after such sections made in the case of rabbits, it is possible to see appearing in the cylinders, and in the midst of these granular bodies, the myeline cylinders, but exceedingly delicate. Sometimes several myeline cylinders can be distinguished in the same sheath. All nerve fibres present this mode of regeneration with so much exactness, that it is impossible to doubt it. M. Vulpian has never observed the embryonal formation first mentioned.—*Gaz. Méd. de Paris.*

Action of Iodine on India Rubber.—At a recent meeting of the Société Méd. des Hôp., of Paris, M. Beaumetz called attention to the fact that gum-elastic tubes, either vulcanized or non-vulcanized, when subjected to the action of iodine—as, for example, in the case of fluids for injection of cavities, etc.—speedily become augmented in size, hard, and exceedingly brittle.—*Gaz. Hebdom.*

Subcutaneous Injection of Mercury in Syphilis.—The injection of bichloride of mercury in the treatment of syphilis finds a warm advocate in Dr. Staub, of Strasbourg (*Traitément de la Syphilis*), who specially recommends the following formula: Bichloride of mercury, 1.25 *grammes*; chloride of ammonium, 1.25 *grammes*; chloride of sodium, 4.15 *grammes*; the white of one egg; distilled water, 250 *grammes*. One *centigramme* of this is injected daily beneath the skin, in two portions, one-half in the morning, the other in the evening. According to this somewhat enthusiastic writer, the bichloride, so administered, is an invaluable therapeutic agent; infallible in the treatment of secondary symptoms, prompt, complete, and devoid of inconvenience.

Toxicity of the Arterioles.—John J. Mason, M.D., New York (*Jour. Psychological Medicine*, Oct., 1872), after various experiments upon frogs, still adheres to the opinion, expressed in the April number of this journal, that changes in the function of the muscular walls of the arteries, if due to want of nutrition, ought to belong among the phenomena of the latter stages of embolism, and not among those of its earlier stages. He describes a new method of studying microscopically arterial tension in its relation to arterial tonicity, which has not been employed before to his knowledge.

The Phenomena of Menstruation.—The views of Pflüger (*Schroeder's Manual of Obstetrics*) with reference to the cause of the phenomena of menstruation, are as follows: A constant irritation is exerted on the extremities of the nerves imbedded in the fibrous stroma of the ovary by the slow but uninterrupted growth of the Graafian follicle. This is not sufficiently intense to produce reflex action at once, but in the intermenstrual period, the total irritation is so great that reflex action takes place in the form of marked arterial congestion. This sudden increase in the amount of blood produces essentially two results: In the first place, that Graafian follicle which is the farthest advanced in development ruptures, in consequence of the increased intra-follicular pressure; while, in the second place, a hæmorrhage takes place from the free surface of the uterine mucous membrane; hence the escape of the ovum from the follicle, and the menstrual flow, are joint effects of one and the same cause, namely, the pressure which the developing follicle exerts on the extremities of the nerves, which are distributed throughout the ovarian stroma.

Ovarian Cyst operated on during Acute Peritonitis.—Dr. Richard T. Tracy, of Melbourne, recently communicated to the *Royal Medical and Chirurg. Society* another case of this nature. A patient, aged 31, married five years, mother of two children, had noticed the tumor since fifteen months. When first seen she was in a hectic condition, with a rapid and feeble pulse, and suffering great pain from the enormous distension of the abdomen. Some relief was at once obtained by tapping and drawing off two quarts of colloid fluid. After the tapping she was removed to the hospital and carefully examined. Her stomach was very irritable, and she needed to be supported by nutrient enemata. Her temperature was 102°, pulse 120°, and abdominal tenderness extreme. As it was evident she would soon sink unless something could be done to relieve her, ovariotomy was performed on March 19th. The tumor (multilocular) was almost universally adherent, the peritoneum was deeply congested, much thickened, and its cavity full of flaky lymph. The pedicle was secured with a clamp, and the wound closed by deep silk sutures and superficial ones of horse-hair. Two hours after the operation there was a considerable fall in the temperature. On the fourth day there was a considerable escape of gas and fetid fluid from the wound, and from this time recovery was rapid.—*Br. Med. Journal.*

Removal of Portions of Diseased Tissues in Cases of Carcinoma Uteri.—Dr. Alexander Simpson, Professor of Midwifery in Edinburgh, gives his experience in this procedure, as follows: Agreeing with most gynæcologists in the propriety of amputating the cervix when by so doing all the diseased tissues can be removed, he thinks that benefit may be derived by cases more hopeless, by removing as much as possible of the cancerous growth. Regarding the dangers of operative interference arising from hæmorrhage, pain, aggravation of the disease, and risk to life, he thinks: 1. Although digital examination of a case of carcinoma uteri is apt to be attended with a certain amount of hæmorrhage, the bleeding is all from the surface, and in the case of removal, the bleeding lessens as healthier tissues are reached. 2. As for the pain produced, it will be found, when anæsthesia is not resorted to, that though these patients suffer commonly enough to a degree peculiar to their disease, yet operations for the removal of the diseased mass are not attended with much suffering, and may be performed without the aid of an anæsthetic. 3. It need not be apprehended that the progress of the disease will be hastened by this kind of interference; for experiments show that the more thoroughly the disease is removed the longer it is in returning, and is no more rapid in its course, when it does return, than when left to itself. 4. The operation is not dangerous to life. Out of twelve cases operated upon by himself, and a large number similarly treated by Sir Jas. Y. Simpson, only one case resulted fatally, and in that death was due to collapse.

The advantages to be derived from the operation are, 1. Arrest of hæmorrhage, the persistence of which exhausts the patient. In many cases the bleeding takes place in part, no doubt, from the mucous membrane, which becomes hypertrophied as a result of the excitement in the whole organ attendant on the presence of a morbid growth; but whether the source of the bleeding be menorrhagic or metrorrhagic, it is always lessened, and sometimes arrested by the removal of accessible portions of cancerous tissue. This is markedly the case when we have to do with the so-called cauliflower-excrescence, or with an expanded epitheliomatous os; 2. And nearly as important, is the arrest or lessening of the fetid discharge, which of itself renders the patient miserable. 3. In a case of cancer of the cervix uteri, pain is not necessarily a prominent symptom, until the disease has made great progress, being sometimes quite insignificant; but where the disease involves the uterine cavity, pain is an early, most distressing, and almost constant symptom, and the relief afforded by ablation of even a portion only of the diseased tissue is immediate and striking. 4. Although but little can be said of the effect of the operation in prolonging life, owing to the limited number of cases which have been treated, Dr. Simpson has seen no instance in which life appears to have been shortened, and he is of the belief that the arrest of the exhausting discharges and the relief of pain must of themselves tend to lengthen the patient's existence.

Not only are cases of cauliflower-excrescence, or mushroom-like epithelioma of the os uteri where the cervix is healthy, suitable cases for this mode of treatment, but so, also, are cases of encephaloid character with projecting, hyperæmic masses; schirrus, and other varieties, which present an excavated surface, and when ulceration has not perforated the uterine or vaginal walls.

The galvano-cautery, the *écraseur*, and the *curette*, are the instruments recommended.—*Br. Med. Journal.*

Hydropneumothorax.—Sir Henry Thompson, M.D., F.R.C.S. (*British Medical Journal*, Oct. 5, 1872), in a clinical lecture on this rare disease, stated that he had been induced to modify some of the opinions formerly expressed by him. He was of the opinion, whatever the view taken of the case on admission—whether the man was phthisical or not—whether a gap in the pleura existed at the time, or not—under all circumstances, an operation was unavoidable. But the drainage-tubes ought to have been inserted either on the instant, or, at any rate, after the discovery of the following conditions: free and direct communication between the left pleural cavity and the trachea, advancing disorganization of the right lung, and ever-increasing accumulation of pus, in spite of its enormous discharge. By adopting these measures, the pus might have been kept within bounds, and diverted from the trachea and bronchi; the pneumonic processes, which were so rapidly disabling the only lung of any real use in respiration, might have been arrested; and although the man must invariably have died an early death from combined exhaustion and apnœa, he said that the patient might have been saved from dying of downright suffocation—literally drowned in pus.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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THE FARMING-OUT SYSTEM FOR FOUNDLINGS.

The publication in the present number of the Report on Foundlings and Foundling Institutions, made by Prof. Jacobi to the Medical Society of the State of New York, affords us another opportunity of calling the attention of the profession at large to some very important facts. Our readers are well aware that this will not be the first time that we have had occasion to comment upon papers on the same subject by the same author. The present report is an embodiment of all that has preceded it, and much more besides; and, as a whole, must be considered the most elaborate, thoughtful, and painstaking document of its sort that has appeared for a long time.

Those of us who have given this subject their special attention, who have followed the discussion from its commencement, cannot fail to perceive that many of the points taken have been fortified by additional facts and observations. These latter are of such importance as, in our opinion, to warrant the publication of the report in full. In so doing we believe we discharge a duty we owe to a profession which has always interested itself in projects having for their aim the prevention of sickness and the preservation of human life. No class of the community has a stronger claim upon us, in this respect, than the one of which the paper in question treats.

On the principle that truth never loses anything by discussion, and that continual agitation of matters bearing upon reform are always in order so long as the evils which they are intended to remedy exist, we are ready to welcome the occasion which the report creates.

The care of Foundlings involves a great many matters of detail, the importance of which upon the general question cannot be appreciated unless they are carefully studied. The report before us is so replete with the kind of information required, that there can now be no excuse for ignorance of facts. We shall not, of course, attempt to go over the paper point by point; this would obviously be unnecessary; but, as before intimated, we should neglect a duty we owe to our profession and to humanity, if we did not take advantage of another opportunity of urging the adoption of the plans of reform proposed by Dr. Jacobi, and of endorsing the resolutions founded thereon and passed at the last meeting of the State Society.

In the discussion of the subject we must start with the assumption, based upon a law of nature, that the infant thrives best at its mother's breast; that any departure from this condition is at the risk of the health of the little one, if not, in a certain majority of cases, of its life. A statistical examination substantiates the assumption, and gives it all the significance and power of a fact.

A like examination into the relative advantages of country and city residences, speaks as strongly as figures can, in favor of the former as the rearing places for children. It is shown that the mortality of Foundlings in cities is actually three times that in rural districts. The reasons for this difference can be explained in many ways. First, they have the great advantage of purer air, the absence of all those diseases depending upon impurities in the atmosphere, and of overcrowding, the comparative non-liability to contagious diseases, better care and better nursing; and, in bottle-fed infants, the facility with which fresh and pure milk is to be obtained.

The opposite of all these good effects are to be seen in the very institutions provided in our cities for the care of our little castaways. In them we have a concentration of all the disadvantages of living in the city. The legitimate child in any locality always has the best chance to live. It is reared in the bosom of a family; it is during the first year, its greatest period of mortality, the recipient of undivided attention and care; every want which the unceasing devotion of a mother's love can best appreciate is supplied; and last but not least, it is plentifully supplied with its natural food.

The poor innocent illegitimate is under precisely opposite conditions. Its best friend is practically a nonentity; the very nourishment which it has a natural right to expect is denied it, and it is abandoned to the cold charity of a Foundling Asylum. The disadvantages under which it labors, commencing as they do from the actual fact of its birth, are increased by the very efforts made by the well disposed to overcome them. The very asylums reared at so much cost, and conducted with so much expense, are shown, by the very nature of their facilities for the congregation of individuals, and other conditions always found in the best regulated institutions of the sort, to be the worst possible places for these little ones. The records of mortality prove this in such a conclusive manner, that we are no longer innocent of wholesale slaughter, if we

do not protest against such institutions as a class, and demand that they be appropriated to other uses. It is not our purpose to repeat the actual figures to substantiate this general statement, as such statistics are given in the report, and can speak for themselves.

It would not be fair to presume that these results are due to mismanagement of these institutions, as each one under separate supervision and different forms of government, gives very nearly the same ratio of figures. This is the case not only with such asylums as have been examined in our own country, but with similar institutions in Europe. The inference is certainly plain, in the absence of any other conditions in common, that the increased mortality is due to the asylum plan of caring for the Foundlings.

The careful and conscientious study of this same question in Europe has resulted in the abandonment of Foundlings Institutions as a class, and the substitution of the Farming-Out plan. Dr. Jacobi's report is a powerful argument in the same direction. The question presents itself to us, in this connection—Are we ready and willing to profit by the experience of others; or must we doggedly go over the same ground as those who have now shown us an example? The only rational way to remedy the evils attending the asylum plan, is to urge its abandonment, and the substitution of the buildings for houses of temporary reception for infants previous to their being sent to private families in the country to be nursed.

We agree with the report in the expediency, nay the necessity, for the State to hold itself responsible for the care of foundlings thus distributed, and that all private enterprises not favoring such a plan should be discouraged, and all institutions controlled by self-constituted authorities should cease to exist. By the adoption of such a measure, we should then have the responsibility where it belongs, and at the same time insure an efficiency and uniformity to a well-contrived system. It is obvious that neither of these conditions could be fulfilled by any Board of Directors, no matter what their standing in society might be, or by any Board of Trustees, however trustworthy. As is always the case under such circumstances, no one plan could be agreed upon; and the general good of the little ones would be wholly lost sight of in the competitive and partisan struggle for the welfare of the respective institutions.

There would be many difficulties to encounter in perfecting a plan of farming-out, such as is the case in Europe; but we should make a beginning, and trust to such expedients as would be prompted by the exigencies.

The subject is one which should interest our legislators, and stimulate them in the cause of society's dearest trusts to devise a suitable law, to cover all the requirements. This, it strikes us, can easily be done by the creation of a suitable number of Commissioners of Inspection, appointed by the Governor, who should not only have the control of the houses of reception, but of the respective families in which the infant is placed. If such officers could be aided by voluntary inspectors, as is the case in Berlin, the supervision would be more thorough, and consequently more salutary.

It may seem a bold measure to deny the usefulness of institutions upon which so many dollars have been spent, and so much political and social influence exerted; but humanity is inexorable, and points out to us the necessity of abandoning hospitals whose best services to science must be summed up in their being promoters of the study of infantile pathology.

In conclusion, we commend the report to the careful, thoughtful study of the political economist, legislator, and humanitarian, in the hope that some practical good may come of the suggestions and conclusions therein contained.

WHAT ARE OUR DIPLOMAS WORTH?

A BILL has passed the Legislative Council of Jamaica, and received the approval of the Governor, which declares the sufficiency of all diplomas recognized in Canada, or any other British Colony. The English Medical Journals have been terribly exercised over the matter; and the practitioners on the island, who have been enjoying something of a monopoly, have gathered up lengthy petitions against the passage of the bill. The former are in an agony of fear that the forthcoming medical man (who will be obliged to pass an examination before a Medical Council of Five, before he can receive a license) will not be educated quite up to what they think the standard ought to be, or in other words, that he will not cease to patronize American at the expense of English schools. Our British confrères, as might be supposed, are only anxious that the innocent public may be protected from the practices of any but themselves.

Both parties have made the fullest possible use of what they are pleased to call "the late disclosures of the traffic in diplomas and degrees." We take this occasion to inform our cousins that the only people who were ever deceived to any extent by the disreputable institutions who issued these documents were residents of the British islands, who, as the investigation in the case of the Philadelphia schools showed, were chiefly the ones who sought after sham degrees and diplomas. Since these terrible "disclosures," the British journalistic mind has affected to be utterly bewildered with regard to the standing and character of our own medical schools; and quite disposed to consider all of them open to suspicion. This state of things does not much concern either ourselves or our schools, but gives us occasion to say, that if those who manage the English Journals had ever had any special desire to know whether the infamous institutions in Philadelphia had any local standing, they need not have taken much trouble in order to find out. We remember but one instance in which an English medical

editor has manifested in a public way his desire for information upon this subject, and that was in the case of the editor of *The Doctor*, who a year ago, having, what it appeared to be, a forged diploma offered him for purchase, did something which does not seem to have occurred to the minds of his *confrères*, viz., asked for information.

Apropos to this question of the standing of our medical schools, is the fact that not long ago the French Minister of Public Instruction sent a gentleman to this country, who reported not only that many of our schools were *reputable*, but that some of them could teach medicine, surgery, and obstetrics quite as well as it was done in Paris, and, indeed, in some respects, rather better.

THE MEDICAL REGISTER.

The communication of the Medico-Historical Society bearing upon the matter of registration appears in another part of this issue. The spirit which has prompted the explanations is a very commendable one, and must prove to every one interested, that if this organization does not act rightly toward the profession it is certainly not because it does not intend so to do. If the gentlemen composing the Society have constituted themselves a tribunal, they have, likewise, voluntarily assumed the responsibilities, and the arduous labors connected with the exercise of their particular function. It is certainly a matter of surprise that so little fault can be found with an undertaking, having for its object the satisfying of so many. The results of their labors are more than praiseworthy. In a very short period of time, they have gained the confidence of the entire profession of the State, and despite occasional, and unavoidable errors, they will, no doubt, continue to maintain their reputation. The explanations made by the President, are doubtless as reasonable and satisfactory to the profession at large as they are to us.

THE AIR-TIGHT SYSTEM FOR REMOVAL OF NIGHT-SOIL.

In accordance with a promise made some months since, the air-tight system of emptying house vaults has been inaugurated. As might be expected, there is much opposition to it on the part of those interested in the rejected method. Thus far the Health Board has firmly stood its ground. Let us then hope that the old line scavengers will be fairly vanquished, and forever driven from their *soil*.

OUR FOURTH DOUBLE NUMBER FOR THE YEAR.

The present double number completes the four necessary to enable us to close the volume with the end of the year. In spite of the extra amount of material which we have been compelled to use, we regret to state that there are still a large number of deferred articles in type, waiting for room. We are, therefore, in view of this fact, compelled to ask of our contributors a little more indulgence, assuring all that they shall soon have a hearing.

Galvano-Caustic Amputation.—James T. Whittaker, M.D., of Cincinnati, (*The Clinic* Oct. 5, 1872), publishes a case of galvano-caustic amputation of the neck of the womb, with perfect ease and expedition, by means of the galvano-caustic noose. It was slipped over the cervix with the greatest ease, and adjusted smoothly about it, about half-an-inch from its extremity; the wire was screwed home and touched the spring of connection with the battery. The progress of the wire as it slowly tightened under the screw was evidenced also by the sound, smoke, and savor of *cuisine* from the rapidly-burning tissue. In one minute the operation was complete, and the ring of detached cervix fell from the tube. The uterine surface was perfectly white and clear. There escaped throughout, nor afterward, no single drop of blood.

Aconite Root, Rhubarb, Aloes, and Elixirs.—Dr. E. R. Squibb (*Drug. Circular*, Oct. 1872) read papers on *aconite root* and rhubarb, at the annual meeting of the Am. Pharm. Association, and said that much of the aconite root is destitute of the activity of the drug, and he relies mainly on *taste* as a means of determining quality. In taking a small handful of roots from a bale as a sample, at least eight of ten should give the peculiar feeling of *numbness* to the tip of the tongue and lips which is characteristic of this drug. In testing this root but a very small fragment should be tasted, and immediately spit out; if no numbness is experienced within five minutes, another piece of the sample may be tasted; but whenever numbness is produced, no other piece should be tried until the sensation disappears. If this method is adopted, he thinks no one need be troubled with an unsatisfactory lot of aconite root.

In regard to *rhubarb*, he alluded to the disposition to prepare the root in a form convenient for use, but which destroyed the appearance, so that the characteristic appearance of the original was lost in manipulation, and thus afforded opportunities for unprincipled persons to foist a worthless article on the public.

He opposed the whole class of *elixirs* as wrong in principle and practice. It presupposed a "case" in which a certain formula was devised, a popular name is now given for it, and the elixir is to be the cure-all for all ages, classes, and conditions.

In giving some statistics about *aloes*, he remarked that socotrine aloes lost from 5 to 10 per cent. in straining, and if dried and strained from 15 to as high as 27 per cent.

A New Medical Paper.—An eight-paged sheet, called *The Physician and Surgeon*, to be published monthly at Baltimore, Md., was started in September. It appears to be the organ of the College of Physicians and Surgeons of that city.

Reviews and Notices of Books.

Medical Electricity; a Manual for Students, showing its most Scientific and Rational Application to all Forms of Acute and Chronic Diseases, by the different combinations of Electricity, Galvanism, Electro-Magnetism, Magneto-Electricity, and Human Magnetism. By William White, M.D., Professor in the New York Medical College for Women. New York: Samuel R. Wells, Publisher. 1872.

This is one of the worst books ever written on any subject by any man in any country since the much-abused art of writing books was discovered.

There seems to be something in Electricity very attractive to a large class of uneducated or half educated,

semi-scientific, underdone men and women of all ages and nationalities. Formerly Electro-Therapeutics was consigned body and soul to the class of practitioners that the author represents, and only of later years have men of the very opposite stamp—thoroughly educated, scientific by instinct and by experience, liberally cultured and large-minded—taken earnest hold of this department.

This little book ought to have been written ten years ago, for it represents a type of civilization that is fast disappearing even in this country, where it has run riot for a century. It suggests a dark period in the history of science, and yet it will no doubt find admirers.

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF THE BROMIDE OF POTASSIUM AND BROMIDE OF AMMONIUM. By EDWARD H. CLARKE, M.D., and ROBERT AMORY, M.D. Boston: James Campbell. 1872.

WITHIN the past few years the study of practical therapeutics by means of physiological experiments, combined and compared with clinical observation, has been followed with great care and skill, and as a result of it our ideas as to the action of many drugs have emerged from the mists of empiricism to almost a condition of exactitude. It is proved that such observations are of the very first importance by the fact that they render the physician great aid in discriminating as to what class of patients a given remedy is beneficial or injurious. Considering the great extent to which the bromide salts have been used, and in many instances without an adequate reason for their use, it is certainly pleasant to know that we have a treatise which will clearly and fully indicate how to use them—in what class of cases they are beneficial, and in what class they are not. The work before us is composed of two parts, the one clinical in its character, and written by a master on the subject of therapeutics, Dr. E. H. Clarke. The other part a corollary in the shape of an article containing the results of physiological experiments by Robert Amory. We suppose that, as a matter of deference to Dr. Clarke's position, his portion of the work has been placed before that of Dr. Amory, which in truth should have preceded it, but this is too small a matter to demand criticism. We shall, as far as space permits, examine into the contents of both parts.

In the introduction to his portion of the work Dr. Clarke pays particular attention to the mode of absorption of the bromides, and he very clearly shows how it should be administered. He says:—"1. They should be freely diluted with water before they are swallowed. There should be at least a drachm of water to each grain of salt. 2. They should be taken when the stomach is empty and practically free from acid. Their administration fifteen minutes before a meal, or three hours after one, secures the condition, and is therefore the best time for taking them. 3. They should be given with caution to the stomach when there is gastric irritation, or inflammation, or degeneration."

In the latter condition Dr. Clarke says, that the bromides are absorbed by the rectum, though more slowly, and he has found a solution of ten grains to the ounce to be retained, but thinks that a solution of the salt in water gruel is better: according to Dr. Clarke the skin does not absorb the bromides, which are too irritant in their nature to be used by hypodermic injection, hence the only agents of absorption are the stomach and rectum.

In the matter of elimination there are several facts brought forward which are of importance in clinical practice. It is shown that elimination accomplishes much more slowly than absorption, and that the process is greatest during the first eight hours after the injection of the salt, so that if we desire to keep the system fully under the bromidal influence it is necessary to repeat the dose at least every eight hours. This fact is interesting as pertaining to the treatment of epilepsy. In clinical practice we find that sometimes we have reason simply for one dose daily, repeated when necessary—in others we have necessity for its continuous administration. Dr. Clarke studies each of these conditions very carefully. The conditions requiring single doses are insomnia from mental anxiety, insomnia accompanying teething and the exhaustion, and the insomnia due to prolonged mental effort, hysteria, pregnancy, general nervous irritability, and in fact any condition of cerebral hyperæmia. The single dose should always be at least twenty grains, and may even be as high as sixty. This dose may be administered at once, or divided, portions given every fifteen minutes.

The general effect of the bromide of potassium and of other bromides is that of an hypnotic, and Dr. Clarke agrees with other observers that it is not an anæsthetic in any sense. The effects are those of sedation of the nervous system, and the patient when under the influence of the drug is in a condition of mental and physical lassitude. In using the drug, however, care must always be taken to distinguish by the features of each case whether or not hyperæmia or anæmia of the brain is present, as the bromides are very beneficial in the former and deleterious in the latter. This fact is proved clinically by those cases of anæmia to which bromide is given as a hypnotic, yet sleep is not produced, but the wakefulness rendered more marked. In cases of sleeplessness from acute pain, the bromides are rarely of any service, and here opium is indicated, but in the condition of exhaustion and restlessness which follows after pain, the bromides can always be used with benefit. Dr. Clarke confirms the observations of Da Costa as to the corrective influence of bromide of potassium over opium. He says that he has noticed that a thirty-grain dose administered an hour before the administration of opium enhances the anodyne effects of the latter, and that persons in whom unpleasant effects are produced by opium can take it with benefit when preceded by a dose of the bromide. This rule does not hold good, however, in every case.

Dr. Clarke speaks very confidently of the action of the bromides in controlling reflex sensibility, and as this and reflex hyperæsthesia are so often very distressing symptoms of many diseases, these salts may be in clinical practice of very great value in controlling them. In the continuous administration of these salts we have to fear such unpleasant consequences as impairment of sexual appetite, muscular weakness, irritation of stomach, and the remote action in disturbing the natural metamorphosis of tissues. Dr. Clarke's views upon the subject are in accord with those of Buethoton and McElroy, and are partially confirmed by Dr. Amory's experiments. Attention is, however, called to the fact that attention to diet and other concomitants may obviate these unpleasant results. Dr. Clarke speaks of the action of toxic doses, but adds nothing new. We think that we cannot do better than incorporate here the conclusions arrived at by Dr. Clarke as to the indications for the continuous use of the bromide of potassium, as he has placed them in an aphoretic form.

1. As a palliative and comforter of nervous symptoms in many diseases of dissimilar character, as pneumonia, bronchitis, rheumatism, gout, simple and continued fevers, conjunctivites, ovarian disease, and the like.

2. As a moderator of reflex action in certain local maladies, as irritation or inflammation of the fauces,

bladder and vagina, emissions, reflex nausea and vomiting, and nymphomania.

3. As an anodyne or anæsthetic in various neuroses: as in some kinds of headaches and neuralgia, angina pectoris, pertussis, asthma, and during the menopane.

4. As a moderator or sedative of general reflex power in spasmodic and convulsive diseases, as epilepsy, hysteria, and chorea.

5. As a vascular sedative in hyperæmia of the brain and spinal cord. The last action, of course, underlies all the others.

As regards the antagonism between bromide of potassium and strychnine, which was first spoken of by Luison, of Paris, in 1868, Dr. Clarke states that he has observed the fact clinically and physiologically, and he quotes a case of strychnine poisoning which he treated, in which he used bromide as an antidote with success. The therapeutic properties and action of bromide of ammonium is shown by Dr. Clarke to be precisely similar to that of the potassium salt, and in speaking of the fact which was first pointed out by Brown-Séquard, that a combined large dose of the bromides of potassium and ammonium did not produce bromium where small doses of either salts separately given would, he agrees perfectly with the observer, and disagrees with Echeverria, who states to the contrary. As regards the treatment of epilepsy, Dr. Clarke coincides entirely with the views of Brown-Séquard and Voisin as to the necessity of giving small doses during the day and the large doses at night in order to prevent drowsiness; that enough of the salt should be given to produce an evident effect, such as anæsthena of the fauces and pharnyx, and to increase, if necessary; that the doses should be given without interruption; that debilitating effects should be combated by strychnine, oxide of silver, cod-liver oil, wine, generous diet, and douche and shower baths, and that a purge should be given every week, as that seems to give a new impulse to the action of the salts. Dr. Clarke thinks that the bromide of lithium acts efficiently in some cases where the bromide of potassium has failed, and that it produces a more rapid and intense sleep than the other salts. In these views he is in accord with Dr. Weir Mitchell. The bromide of sodium is rather more pleasant to the taste than the other bromide salts, but, as shown by Voisin, its action is not greater than that of the others, and Dr. Amory thinks it is not as valuable as the potassium salt. Dr. Amory's experiments are very numerous, and were conducted with great care and skill. They were instituted to determine the various modes of absorption, the effect upon the secretions, the modes of elimination, and the physiological and therapeutical effects upon the system, and are fully in accord with the conclusions of Dr. Clarke. The work is certainly an advance to science, and if every efficient drug was studied as carefully, therapeutics would not be such an obscure branch as it is.

New Hospital in Philadelphia.—The corner-stone of the new building of the Jewish Hospital Association of Philadelphia, was laid October 9, 1872. The Grand Lodge of Freemasons of Pennsylvania, conducted the ceremonies.

Brown-Sequard.—A free lecture on "The Origin and Signification of the Symptoms of Brain Disease," with interesting experiments, was given by Dr. Brown-Séquard, October 5th, in the lecture-room of the Boston Society of Natural History, Mass.

Massachusetts General Hospital. — Dr. Norton Folsom, late of New York city, has been appointed Resident Physician of this time-honored institution.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Sep. 25, 1872.

Dr. A. L. Loomis, President, in the Chair.

(Continued from page 474).

INFRA-AURICULAR TUMOR INVOLVING PORTIO DURA.

Dr. Gurdon Buck presented a compound tumor removed from the space between the left mastoid process and ramus of the inferior maxilla, involving the seventh pair of nerves. The patient was a married woman of fine healthy appearance and in comfortable circumstances. The growth made its appearance several years ago, but only two years since had the face suffered from any distortion. At the time of the operation the mass was salient, equivalent in size to the end of the thumb, was elastic and evidently fluctuating. To its most superficial portion the integument adhered and presented a grayish hue different from the surrounding skin. It was insensible to pain in handling, and was quite freely movable, although deep and firm connections at its base with deeper parts were very readily made out.

The operation was performed September 23, with the aid of ether. An incision was made behind the ear and over the mastoid process, elliptical in shape and including a portion of skin over its summit. The tumor being exposed, an effort was made to avoid opening the sac, but its contents escaped, however, as the result of traction during the operation. The operation itself proved to be a formidable one on account of the extreme narrowness of space, and the bony elements on either side, within which the manipulations had to be performed; but by drawing the tumor out of its bed and snapping its connections by means of a scissors curved flatwise, the enucleation was carried on without a great deal of difficulty. The jugular vein was adhering to and skirting the margin of the tumor; this had to be carefully avoided. The portio dura was exposed, emerging from the substance of the tumor anteriorly, and another branch proceeding from the tumor, and which was seen connected with the specimen, an inch in length, was isolated. The course it took was upward toward the occipital bone. In the course of this nerve was felt a small knotty extraneous growth.

The growth after its extirpation exposed a deep wound, bounded by the ramus of the lower jaw anteriorly, mastoid process posteriorly, and sterno-cleido-mastoid muscles below. Above, the finger was brought in contact with the transverse process of the atlas, and the styloid process could be traced. Crossing the cavity deep in and obliquely from above downward, and behind forward, was the degastric muscle, entirely isolated. From the fact that the deep surface of the tumor presented a sulcus corresponding to the situation of this muscle, it was inferred to be upon that organ it had been developed.

The quantity of blood lost was only three ounces.

The patient, twenty-four hours after the operation, was very comfortable. She did not then, nor before, complain of any numbness of the occiput. In conclusion he asked the question as to the probability of a recovery of the function of the nerve after the cicatrization should be complete.

REGENERATION OF NERVE-TISSUE AND NERVE FUNCTION.

Dr. Brown-Sequard replied that although it was a

fact that nerve-tissue was regenerated, it was nevertheless true that when a large nerve was excised, it rarely recovered its functions entirely. There were, of course, exceptions to this rule, but they were only exceptions. He referred in point to a case of exsection of a large portion of the infra-orbital nerve for the relief of severe neuralgia. This operation was twice performed on the same patient by Sir William Fergusson, and twice the nerve had regenerated itself, so that the former sensibility was not in the least impaired. The return of motory power was not so complete. The spinal cord was at one time considered to be nothing more than a large nerve, but experiments have now proved it to be a nervous centre. In consequence of this, the results of injuries to it are peculiar, as regards the regeneration of the respective functions which belong to the nerves which it supplies. They are in fact entirely opposite to those conditions which we notice in the nerves. For instance, injuries to the spinal centre show a disposition to recovery of the motor powers, but very rarely of sensibility. In one case of an injury to the cord by a stab wound, the sensibility of the opposite side was at a minimum after the lapse of fifteen years, while motion of the corresponding side was nearly perfect.

Dr. Buck, in answer to a question as to the character of the tumor removed by him, stated that it was made up of two distinct growths; one comparatively solid and the other cystic. A careful microscopic examination of its structure was promised.

Dr. Knapp thought that the tumor was a compound of a cystic and enchondromatous growth. He had met with such situated between the ear and mastoid process, but not deeper than the subtegumentary tissue.

PEDUNCULATED POLYPUS OF PERI-ANAL REGION.

Dr. Post exhibited a pedunculated polypus removed from the verge of the anus of a gentleman, aged eighty-six, who had up to the time of examination imagined himself afflicted with piles. The mass was spherical in form, and three-quarters of an inch in diameter.

NEUROMA.

He also exhibited another small tumor which he classified as a painful subcutaneous tubercle. The patient was a female aged fifty, who had been conscious of the existence of a hard tumor on the anterior portion of her thigh for the past seven years. At times it was the seat of paroxysms of severe pain, which showed a disposition to increase in severity and in frequency. Contrary to the rule in such cases, the growth was discovered beneath the aponeurotic fascia.

Impalement on a Broomstick—Perforation of the Bladder through the Rectum—A Piece of Cassimere deposited in the Bladder and becoming the Nucleus of a Stone—Lithotripsy—Congenital Stricture of Urethra—Internal Urethrotomy.

Dr. Post presented the above specimen, with the following history:—

On the 9th August, 1872, I was requested to see Mr. B., a young man 19 years of age, who, about four months before, in jumping over a broomstick, had become impaled, the stick entering the anus without any external wound, and penetrating the bladder, so that the urine was discharged by the rectum. A hole, an inch in length and three-quarters of an inch in breadth, with loss of substance, was found in the seat of his pantaloons. The injury was followed by a severe attack of peritonitis, which yielded to full doses of morphia. The bladder was left in an irritable condition, and his physician, in attempting to introduce an instrument through the urethra, was unable to pass it much beyond an inch from the external orifice. The patient denied ever having suffered from any disease or injury of the urethra. He said that he had never passed his urine in a full stream, but had not been aware that he was different from other boys in that respect. When I saw the patient, I attempted to pass a variety of instruments, large and small, flexible and inflexible, but they were all arrested at a distance of a little more than an inch from the external orifice of the urethra. I thought that the very small instruments passed into a large lacuna. At length, after repeated ineffectual efforts, I succeeded in passing the end of a small pocket probe beyond the stricture, and it moved freely within the canal. I afterwards succeeded in passing through the stricture a sheathed urethrotome, and, causing the blade to project beyond the sheath, I withdrew the instrument, thus performing internal urethrotomy, making the incision upward toward the dorsal surface of the penis; after which I passed a steel bougie, No. 13, into the bladder. I recommended the attending physician to dilate the urethra, at intervals of a few days, with large bougies. On the 29th August, the doctor called on me to say that the urethra remained free at the seat of the stricture, admitting bougie No. 14 without difficulty. The operation had scarcely been followed by any irritation at the seat of the incision, but he had discovered a calculus in the bladder, and the organ continued very irritable, so that he passed his urine very frequently, with much pain, and small quantities at a time. He had begun again to pass a portion of his urine through the rectum. I visited the patient, and found that some longitudinal contraction had taken place at the seat of the incision which I had made in dividing the stricture, giving to that portion of the penis a curvature with downward concavity, constituting a sort of chordee without erection. In passing a curved inflexible instrument through this portion of the urethra, I found it necessary to reverse the ordinary position, until I had passed this abnormal curvature, and then, turning the instrument into its usual position with the concavity upward, there was no further difficulty in conducting its extremity into the bladder. In this way I passed into the bladder a medium-sized duck-bill lithotrite, and, although the bladder was contracted on the stone, and contained very little urine, I had no great difficulty in seizing the stone by a diameter of three-quarters of an inch. As the stone was of soft consistence, it was easily crushed. I introduced the lithotrite three times, each time seizing and crushing the stone or its fragments, and bringing away a quantity of detritus in the grasp of the instrument. The quantity thus brought away weighed, when dried, eleven grains. I injected into the bladder about four or five ounces of tepid water, which the patient passed in small quantities with difficulty and with pain. The water thus passed contained some gritty granules, but no large fragments. The patient was directed to keep quiet, to drink freely of diluents, and to take an anodyne, if there should be sufficient irritation to require its use.

Sept. 2d.—Since the operation on the 29th ult. the patient's condition has somewhat improved. The bladder is still irritable, and he has pain in passing his urine. He has passed a considerable number of fragments, several of which were arrested near the meatus, and were extracted with forceps. The weight of the fragments collected since my last visit was sixteen grains, making the whole quantity collected, as the result of the first crushing, twenty-seven grains. To-day I injected about four ounces of tepid water into the bladder, and then introduced the lithotrite six times, each

time seizing and crushing a fragment, and removing a portion of detritus included in the jaws of the instrument. In withdrawing the lithotrite charged with detritus there was no difficulty until the expanded portion of the instrument approached the glans penis, when considerable resistance was encountered, and firm traction was required to overcome the obstacle. After the operation four ounces of tepid water were injected into the bladder, after which the patient evacuated a portion of the fluid, and with it several fragments of the calculus. The whole quantity of detritus and fragments obtained at this operation weighed, when dried, twenty-four grains.

Sept. 6th.—No material change has taken place in the patient's general condition. The weight of the fragments collected since the operation of the 2d inst. is twenty-two grains, making the whole quantity obtained from the second crushing forty-six grains. To-day, after injecting the bladder as before, I introduced the lithotrite, and grasped a foreign body, which I removed with considerable difficulty, and found to be a piece of cassimere from his pantaloons—the piece which the end of the broomstick had carried into the bladder. The piece removed was a little more than an inch in length and three-quarters of an inch in breadth. I also introduced the lithotrite five times, each time seizing and crushing a fragment, after which I again injected tepid water into the bladder, to facilitate the further escape of fragments. The fragments removed at this operation weighed twenty grains.

Sept. 10th.—The patient's general condition has improved. He has less difficulty and pain in passing urine. The weight of fragments collected since the operation of the 6th inst. is twelve grains, making the whole quantity collected from the third crushing thirty-two grains. To-day, after injecting the bladder, I introduced the lithotrite three times, each time grasping and crushing a fragment, and withdrawing the detritus. On withdrawing the instrument after the third seizure, I met with an unexpected difficulty from a fragment having been drawn into the urethra in advance of the lithotrite. I was obliged to move the instrument several times backwards and forwards before I could pass the obstruction. I passed the lithotrite a fourth time into the bladder, but could not bring it into contact with any fragment. On withdrawing the instrument I felt a fragment in the urethra, in advance of the scrotum. I introduced the urethral lithoclast several times, and broke off and extracted portions of the fragment. I then introduced a delicate pair of urethral forceps, and after a number of ineffectual efforts, I succeeded in seizing and extracting the fragment. I then introduced a catheter, and injected several ounces of tepid water into the bladder, after which the patient stood on his feet and ejected the fluid from the urethra with much greater force than he had done at any time before. The fragments removed at this operation weighed ten grains.

Sept. 14th.—The patient has decidedly improved since my last visit. He has passed but one fragment—viz., on the day after the operation. He has this morning the sensation of a fragment in the urethra. I introduced the urethral forceps several times along the canal, as far as the junction of the penis with the scrotum, and extracted two considerable fragments and several very minute portions. I then injected the bladder, introduced the lithotrite, and seized and extracted a minute fragment. I introduced the lithotrite a second time, and made a very careful exploration in all directions, but without finding any remaining trace of calculous matter. The patient then rose, and evacuated the bladder in a full stream. The fragments which I extracted to-day, together with that which the patient had passed spontaneously, weighed nine grains, making the whole quantity collected from this fourth crushing nineteen grains, and the aggregate quantity from the four operations one hundred and twenty-four grains.

PERFORATION OF BLADDER BY A CHURN HANDLE.

Dr. Buck remarked that having had occasion to attend a case in Hudson, N. Y., a surgeon of that place related an instance where the same sort of rupture of the bladder had occurred, as the result of an attempt to leap over a churn. The churn tilted at the wrong time, the handle of which found its way into the rectum and thence into the bladder. The patient afterward recovered

Dr. Knapp presented a splinter of wood which he had removed by operation from the infra-orbital margin of a patient, who had been struck on the part by a stick, six weeks before. The interesting feature of the case was the production of clonic convulsions of the fascial muscle, as the result of the presence of this foreign body in that locality.

PATHOLOGY OF ACUTE PURULENT OTITIS MEDIA.

He also exhibited another specimen consisting of the temporal bone removed post-mortem from a man aged fifty-seven. The patient during his lifetime had five attacks of acute purulent otitis media at intervals of about two years. Each one seemed to have its origin in exposure to cold. The last attack began seven weeks ago. When he presented himself to Dr. Knapp, he complained of headache and dulness of hearing. The meatus auditorius was swollen, especially the posterior part. The region behind the ear was painful to the touch, as well as the meatus itself. The membrana tympani was injected, but there were no other symptoms of disease, the pharynx being free from trouble.

As the disease progressed the posterior wall of the meatus became more swollen, and the membrana tympani more injected and slightly bulging. The diagnosis was made without difficulty, and paracentesis of the tympanum was performed. Although no pus escaped, the patient was greatly relieved, which relief lasted for a week. At the end of that time some swelling of the mastoid region took place, attended with pain, which extended backward to the occiput and to other portions of the skull in the vicinity. Despite the usual palliative and preventive measures the symptoms increased in severity. At the end of the third day, Dr. Albert H. Buck was called in consultation with the view of opening the mastoid cells. At that time the man expressed himself as feeling something gurgle in the neighborhood of his ear when he shook his head; he compared it to the succussion of liquid in a bottle partially filled with water. The patient refused the operation; the day after he became very much worse, became comatose in the course of twenty-four hours more, at the end of which time he died.

The autopsy was made the succeeding day (Sept. 24). On opening the skull the superior surface of the brain was free from disease, but the posterior and inferior cavity of the cerebellum was covered with purulent effusion, and pus penetrated into the spinal canal as deeply as it could be exposed. The transverse section of the spinal marrow showed it healthy as far as could be ascertained. In seeking for the origin of the pus the superior petrosal sinus was opened. This was found, however, to be healthy, as well as the dura mater covering the anterior portion of the bone, but the posterior

portion of the bone was destroyed by suppuration, and the antrum mastoideum was in free communication with the sigmoid sinus. Pus did not penetrate into the jugular vein.

Dr. Knapp was of the opinion that had the operation proposed been performed, the patient's life might have been preserved. He remarked in conclusion that this operation was performed in young children by nature, but in older persons the impossibility of such an occurrence is due to the greater density of the mastoid process, which not unfrequently, as the result of previous diseased action, becomes actually eburnated. A specimen, illustrating the latter condition, was exhibited.

Dr. Noyes, in this connection, mentioned a case lately presented by him to the Society, in which there was a free communication between the cavity of the middle ear and the arachnoid.

INTUSSUSCEPTION FROM CONGENITAL DEFECT.

Dr. John W. Warner presented a specimen of intussusception removed from a child aged nineteen months. The little one was taken suddenly ill with cramps in the bowels on Saturday morning (Sept. 21), which continued during the whole of that day. In the evening, Dr. Warner was sent for. There was then extreme suffering on the part of the patient, and this pain, together with the tenesmus, evacuation of blood, and vomiting, were the principal symptoms. All of these continued unabated until death, which occurred at the end of forty-three hours after the attack.

The interesting features of this case were: I. The extent of the invagination comprising that portion of the colon extending from the ileo-cæcal valve to the sigmoid flexure; II. The fact that another child of the same family had died at the same age, two years before, with the same difficulty, death in the latter case resulting at the end of four days.

Dr. Jacobi believed that the fact that two such cases occurred in the same family would give rise to the suspicion that there was an anatomical cause for the accident peculiar to that particular offspring. This anatomical peculiarity, he thought, was an unusual length of the colon, and an unusually loose attachment to the iliac fossa. He suggested the probability that other children of the same parents might die in the same way, but thought that the application of a broad, snug bandage worn during infancy might act as a preventive.

Dr. Lewis Smith stated that in the large proportion of cases of this sort there was a prolapsus of the ileum through the ileo-cæcal valve. He believed that the specimen presented was such an one.

Dr. Castle mentioned a case, which was observed in the foundling hospital in 1866, in which an infant who had been affected with diarrhœa for several days, suffered a prolapse of the ilium and jejunum through the large intestine; nearly eight feet of the small intestine protruding beyond the anus.

The Society then went into executive session.

Stated Meeting, October 10, 1872.

RETAINED PLACENTA THE RESULT OF INDUCED ABORTION.

Dr. Finnel presented a specimen which he supposed to be the fragment of a placenta. The patient was a widow lady, who, finding herself three months pregnant, determined to have an abortion. After resorting to the ordinary domestic means, she obtained the services of an individual calling himself a physician, who brought about the desired result by the introduction of a gum-elastic bougie. In the course of three days after the abortion occurred, and everything promised well for the criminals. There was, however, a slight drawback to a rapid convalescence in the occurrence of a dribbling hæmorrhage, which, despite every effort on the part of her attendant to control, continued for a period of five months. Dr. Finnell being called at the end of that time, believed the bleeding to be due to a portion of placenta which had been retained. He accordingly administered an ounce of turpentine and two ounces of castor oil. The dose produced violent pain in the back and strangury, and finally the specimen was voided. Having made no microscopic examination of the mass, he desired that it be referred to the Committee on Microscopy.

Dr. Van Geison asked if it was not the rule that produced abortion was followed by retained placenta, and related two cases in point coming under his observation. He was always in the habit of suspecting all cases of retained placenta as one of the results of manual interference, and believed that if the patient were cross-questioned they could prove a direct relation between the cause and the effect. When abortions occur as the result of disease, the after-birth was, in his experience, never retained.

Dr. Mary C. Putnam suggested that in the latter case the reason for this was, that usually the placenta was more or less completely separated by apoplectic effusion.

TUMOR OF JAW.

Dr. Little exhibited a tumor of the lower jaw, for which the entire half of the inferior maxilla was removed by operation the day before at St. Luke's Hospital. The patient was a lady sixty-three years of age, who came under his observation a year ago, with a tumor the size of a small walnut, involving the central portion of the body of the lower jaw on the right side. This had been growing very slowly for the previous four years. On examination the growth was springy to the touch, and crackled under the finger. As it was growing very slowly, and there was but little deformity, she was advised to wait until the symptoms became urgent enough to warrant operative interference.

About two weeks ago she again presented herself, with the statement that for the six months previous the tumor had been growing very rapidly. It was then found to involve the greater portion of the lower jaw, and to encroach considerably upon the cavity of the mouth.

On consultation it was deemed advisable to remove the growth, which was accordingly done. An incision was made from a little beyond the ear, along the inferior border of right half of the jaw as far as the symphysis menti. The bone being exposed, the first incisor was removed, and a section made at that point with the chain saw. This being done, this portion of the bone was seized and its internal attachments separated principally with the aid of the finger until the coronoid process was reached, when its anterior attachments had to be divided by the knife. After a further separation of the attachments by the finger, the bone was disarticulated by a slight twist. The patient, up to the time of reporting the case, was doing well.

The precaution was of course taken, as soon as it was decided to divide the attachments to the chin, of securing the tongue.

The tumor had not yet been examined; but a full report of its microscopical character was promised.

VEGETATIONS IN AURICLE, HÆMORRHAGIC INFARCTIONS, ETC.

Dr. Hall presented the lungs and heart removed from a patient who was admitted to the Charity Hospital on the 28th of September and died on the 5th of October. On the day of admission she was suffering very much from dyspnœa and some œdema of the lower extremities; was very pale, and appeared to be very much exhausted.

On physical examination the mitral and aortic valves were found diseased, but nothing else was discovered. Death occurred quite suddenly from syncope.

The autopsy was made on the afternoon of the 5th. The woman was five feet and four inches in height, and well nourished. The lower limbs were œdematous, and there was considerable fluid in the right pleural cavity. The right lung was covered with a lymphy exudation, and was in an hæmorrhagic condition. At one point the lower portion of the lower lobe, where the exudation was thickest, a hæmorrhagic infarction was found. Several other infarctions were scattered throughout the lung substance in the neighborhood. The larger infarction, which was encapsulated, was occupied by a reddish clot which was continuous with a clot which occupied a branch of the pulmonary artery in the neighborhood. The lower lobe of this lung was the seat of catarrhal pneumonia, which was fading away into the gray stage.

The heart was somewhat hypertrophied, and the ventricles dilated. The aortic valves contained a number of small vegetations. There was quite a firm mitral stenosis, the aperture just admitting the tip of the index finger; and in the right auricle, on its anterior, was a small vegetation. The kidneys were cystic and fatty.

Dr. Finnell had never met with an instance of vegetation in the auricle, and he believed it to be an exceedingly rare condition,—an opinion in which Dr. Wooster Beach concurred.

Dr. Loomis was led to believe that vegetations in the right side of the heart were more frequently present than we imagine. They were often overlooked; because, perhaps, they were never very large. It was a rule with him, that when he found an infarction in the lung in a patient who did not give a history of pyæmia, he should look to the right side of the heart for the origin of the obstruction.

Dr. Koehler presented a specimen of fibro cystic tumor of the axilla, after which the Society went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 3d, 1872.

Dr. Edmund R. Peaslee, President, in the Chair.

Drs. John Ellis Blake and Max. J. Reinfielder were elected Resident Fellows.

The President acknowledged donations to the library of copies of the Catalogue of the Library of the Surgeon-General's Office, and the Edinburgh Medical Journal.

PUERPERAL THROMBOSIS AND EMBOLISM.

Dr. Fordyce Barker then read an important and lengthy paper on "Puerperal Thrombosis and Embolism" of which we give the following abstract, as the paper is to be published in full elsewhere.

The paper commenced with the history of a case which occurred in his service in Bellevue Hospital. The patient, a German woman, was brought into the hospital by the police and found to be in labor. The labor terminated rapidly (after the bladder had been emptied by the use of the catheter) in the birth of a still-born child. She had no hæmorrhage at the time of delivery and the uterus contracted finely. Eleven hours after, she had a severe secondary hæmorrhage, which was arrested by the use of ice, pressure on the uterus, and ergot. Nine hours after the hæmorrhage, she had convulsions, four paroxysms, with but short intervals between each. Repeated examinations failed to detect albumen or casts in the urine. For the following fourteen days, she did well in every respect. The fifteenth day after labor she complained of severe pain in the abdomen, which was tympanitic and sensitive to pressure, and also pain in the left thigh. The abdominal pain and tenderness subsided after the action of a cathartic; but the pain in the left leg continued the next day, with inability to move the leg. It was found by measurement to be larger than the other above the knee, but not below it. She had no phlegmasia dolens, and the pain and difficulty in moving the leg continued but five days. On the eighth day after the attack of these symptoms, she was suddenly attacked while walking in the ward, with very severe dyspnœa. Her surface rapidly became cold, her countenance expressed great anguish, and the pulse was very small and feeble. After the use of ammonia and whisky she rallied. But the next day her pulse was 132, her respiration 32. She was strictly enjoined to remain in bed, and the bladder was emptied by the catheter. The urine now for the first time was found to be highly albuminous, nearly one half becoming solidified on applying heat and nitric acid. On the third day after, contrary to orders, she rose from her bed to go to the water closet, when she fell on the floor, and died in a few moments apparently asphyxiated. The autopsy revealed dark coagula in the right auricle and ventricle, fibrinous and slightly adherent coagula in the pulmonary arteries. Both kidneys were highly congested. The vena cava contained a fibrinous clot which obstructed both renal veins. The left femoral vein contained a pale, firm coagulum more strongly adherent to the coats of the vessel than that in the vena cava.

Although many of the older writers had noticed these coagulations and theorized as to their causes and pathological significance, and Van Swieten, more than one hundred and twenty-five years ago, had demonstrated by repeated experiments that if coagulation takes place in the veins and the clots are carried to the heart, "the animals suffer great anguish in breathing and rapidly die"; yet these facts received but little attention from the medical world, until Virchow, of Berlin, made his great pathological discovery relative to thrombosis and embolism. Our late distinguished countryman Meigs, was one of the earliest to report a case of death from this cause, the significance of which he appreciated; but his theory in regard to the lining membrane of the vein, the endangium of which he regarded as the blood-making tissue, prevented him from really making the pathological discovery which he so nearly approached.

As the terms thrombosis and embolism have been used somewhat loosely, the author of the paper defined them as follows: thrombosis meaning the arrest of the circulation by coagulation in the veins, the arteries, or the lymphatics. The Greek word embolus means, something inserted like a wedge, something blocking up. Embolism therefore implies that the circulation has been blocked up by something transported from some other point; and the nucleus of the blocking agent may be a fragment of a clot, an excrescence from the aortic

valves, a pus-globule carried in the circulation until it enters a vessel of too small a calibre to allow it to pass on. So there may be arterial, venous, or capillary embolism, each of which has an important pathological result. It is obvious, that if the embolus is in a vein it is always carried toward the heart; if in an artery, it is carried in a direction from the heart.

To the late Sir James Y. Simpson belongs the merit of first describing arterial thrombosis as a lesion of the puerperal state. Since the publication of this essay, quite a number of cases have been reported, but it is undoubtedly a very rare affection.

The symptoms of arterial thrombosis are, absence of arterial pulsation below the thrombus—sometimes increased force of pulsation above the thrombus—pain, sometimes very severe, below the seat of the thrombus, —coldness of the limb—temporary paralysis of the limb. The cause of arterial thrombosis is no doubt in a large majority of cases an embolus, whose original seat was the heart. In most cases, where this has occurred in the puerperal woman, the patient was known to have previously had rheumatism or endo-carditis. But in some cases it seems that the embolus is a clot which has originally formed in the left side of the heart, for the symptoms of cardiac distress have preceded the signs of local obstruction, while the valves of the heart have been free from disease.

The hæmatologists, Andral and Gavanet, Becquerel and Rodier, have shown that in pregnancy as well as in various diseases, as cancer, tuberculosis, typhus fever, etc., there is a peculiar modification of the proportion of the normal elements of the blood, which consists in an excess of the amount of fibrin and serum, and a deficiency of the blood corpuscles, and this condition has been termed hyperinosis. There results from this modification, a special tendency to congulation, termed by Vogel, inopexia.

Barnes, Huvieux, and the author of the paper believe that puerperal toxæmia may rapidly develop inopexia independent of hyperinosis.

Thrombosis or embolism of the pulmonary arteries is a very grave and not a very rare affection of the puerperal period. The thrombosis is sometimes spontaneous or primary; in other cases it is the result of an embolus, the embolus being a clot from a thrombus in the veins. This is no doubt the cause of sudden or rapid deaths, which follow phlegmasia dolens, and sometimes occur in typhus fever, rheumatism, phthisis, etc.

The symptoms of this lesion are great difficulty and anguish in breathing, quick, rapid, feeble pulse, coldness of surface, convulsive contractions of the muscles of the chest, and, in short, the patient dies from asphyxia.

Cases were detailed, one a patient of Dr. I. E. Taylor, another a patient of Dr. Chas. A. Budd, where death took place suddenly when the patients were apparently convalescent from phlegmasia dolens. A patient of Dr. Cheeseman, who had previously symptoms of venous thrombosis in the left leg, but did not have phlegmasia dolens, suddenly was seized with symptoms of asphyxia and other signs of embolism of the pulmonary artery. This was followed by evidences of pulmonary infarctions, as pain in the chest, cough, bloody sputa, etc. Her death occurred in a fourth attack.

It is probable that many cases of this character recover by the fragmentation and absorption of the clot.

It was formerly believed that venous thrombosis was generally the result of phlebitis, but the pathological researches of Virchow, Charcot, and others, seem to have conclusively demonstrated that thrombosis is infinitely more frequently the *cause* of phlebitis than the *consequence* of it.

In the treatment of this affection, the paper urged the importance of not hastily giving up the case, the use of carbonate of ammonia and other stimulants, the importance of opiates, equally necessary as in other shocks, and, above all, such conduct and manner on the part of the medical attendant as will inspire hope and confidence, and keep up the morale of the patient.

The paper referred to the relation of venous thrombus to the infarctions, uterine, renal and pulmonary, and also its bearing on pyæmia, all of which is of great interest in connection with general pathology equally with the special pathology of the puerperal period.

Dr. Austin Flint, Sr., in opening the discussion, said the lateness of the hour and comprehensiveness of the paper would preclude any extended remarks, but he would refer to the vast change in the pathology and history of diseases. Our knowledge concerning embolism and thrombosis is of a recent date. When coming to the meeting he thought of referring to the observations of the late Professor Meigs, but they had been anticipated by Dr. Barker.

Rapid formation of coagula on the right side of the heart is of more frequent occurrence than is generally supposed—as seen from post-mortem examinations. It occurs not only in pneumonia, but in cases of chronic Bright's disease. Auscultation shows that the suffering is not due to deficiency of air, but to deficiency of blood. In a case of chronic Bright's disease auscultation revealed a murmur on the right side of the heart, showing a heart clot. The subject is a vast one, and shows what a change has occurred in our view, for the reason of its being more known. It is an explanation of cases of ulcer of stomach and pulmonary gangrene; also of other affections.

Virchow himself, he remarked in concluding, could not foretell how much light was to be shed in the future on certain pathological conditions.

Dr. T. Gaillard Thomas stated that he had listened with pleasure to the remarks of Dr. Barker and the last speaker, and what he would have to say would mostly corroborate the views of the paper.

In regard to the nomenclature, almost all of the works speak of thrombus of the vulva, which is not thrombus at all. Thrombus vulvæ should be eliminated entirely from the nomenclature. If the name is required for a bloody tumor, the other should be given up. It appeared to him that the names *primary* and *secondary* thrombosis were the proper ones to be used.

It has been said by our forefathers that the blood of a pregnant woman is of a richer character. The truth is, the blood of pregnancy is not by any means of a rich character, although it does contain a larger amount of fibrin. The blood of starvation is a hyperinotic blood; the fibrin found being dead muscle.

In speaking of the varieties of thrombosis, as mentioned by Dr. Barker, he said that he had never seen a case of *arterial thrombosis* in a puerperal or non-puerperal woman, and had seen but few cases of embolism in pregnant women. A few cases of embolism in non-puerperal women were referred to, including one which Dr. Barker would recollect, in which the diagnosis was cerebral apoplexy. The basilar artery had a watery clot. At that time Dr. Flint, Jr., collected five cases from the German journals, from this cause, namely, cerebral apoplexy.

In regard to *cardiac thrombosis*, it appeared to him that many of those cases reported by the author as such, were not. Nevertheless, he did not question that a strong clot in the heart would destroy life. A clot in the right side of the heart is very common after many diseases. Post-mortems are very unsatisfactory, and physicians are liable to be misled by them. He mention-

ed a case of cardiac embolism in a non-pregnant woman, which he saw with Dr. Emmet.

With reference to *venous thrombosis*, resulting many times from embolism, he mentioned several cases to corroborate Dr. Barker's assertions. Sometimes it will occur when the blood is in a hyperinotic state. A case was related where the patient, in the eighth month of pregnancy, suffered from intense albuminuria; premature labor was brought on and a puny child was born. Phlegmasia dolens came on in about nine days from the birth of the child, and over the great toe joint a gangrenous spot appeared; the patient was informed that she must die. Probably there was arterial thrombosis and not venous thrombosis.

In a case under the care of Mr. Skey, the pulmonary embolism was secondary to the thrombosis.

In regard to the treatment of thrombosis and embolism, and that of phlegmasia dolens, he would believe in what Dr. Barker had advocated; the antiphlogistic treatment must not be adopted in these cases.

Dr. A. C. Post remarked, in reply to the proposition of Dr. Thomas, to confine the terms thrombus and thrombosis to coagulation of blood within the vessels, that the term thrombus had been originally employed to signify coagulation of blood in the connective tissue, outside of a wounded or ruptured vein. For example, when the operation of venesection had been performed at the bend of the elbow, and care had not been taken to maintain the incision through the integument in its proper relation to the opening of the vein, blood was effused into the connective tissue, where it became coagulated, and formed a hard swelling, which was familiarly known as a thrombus. This term was in general use long before the modern doctrine of thrombosis had been propounded.

Dr. Post further remarked, that more than thirty years ago he had made an autopsy in the case of a lady who had died a few days after parturition, and whose death had been preceded by urgent dyspnœa In this case, the only morbid appearance which seemed to have any connection with the dyspnœa and with it fatal result, was a large and firm cardiac thrombosis.

The President announced that Dr. L. D. Bulkley would read a paper before the Academy, October 17th, Subject:—Acne.

On motion, the Academy then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Sixty-seventh Annual Meeting, Oct. 28th, 1872.

Dr. Abraham Jacobi, President, in the Chair.

The meeting was very fully attended, about one hundred and twenty members, besides students and others, being present.

NEW MEMBERS.

The following gentlemen, recommended by the Comitia Minora, were elected members:—

Frank P. Foster, 33 East Thirty-eighth street, a graduate in Medicine at the College of Physicians and Surgeons in 1862. Emil Flies, 288 East Broadway, a graduate in Medicine at the University of Berlin, Germany, in 1858. Frank W. Tucker, 144 West Houston street, a graduate in Medicine at the Medical Department of the University of the city of New York in 1871. Clement Cleveland, Woman's Hospital, a graduate in Medicine at the College of Physicians and Surgeons, in 1871.

REPORTS.

The *Recording Secretary* then read the report of the Comitia Minora for the preceding year, following which the *Treasurer* made a report for a similar period, as follows:—

Received during the year	$1,325.21
Paid out " "	709.29
Balance remaining with Treasurer	675.92

The *Library Committee* made no report.

The *President* announced that the funeral of Dr. Henshel would take place on the following Friday.

WITHDRAWALS.

Dr. J. C. Peters announced that he was authorized to withdraw the name of Professor Barker, as a candidate for the office of *President*. Professor Flint also asked the same privilege for himself, thanking the Society for the honor they had wished to confer upon him, and avowing that duties to which he was honorably committed would prevent his acceptance of the position. Dr. Roosa also wished to withdraw from candidateship as censor.

Dr. Henry said he had no desire to occupy valuable time, but wished to express the regret of himself and others at the disposition on the part of so many to decline office in the Society. He also drew attention to the fact that only one slip of the names of nominees for offices, instead of two, as the rules of the Society required, had been sent to the members.

The *Chair* explained that it was owing to an oversight, and said that there was an abundance of slips to be had at the desk of the *Secretary*.

Dr. Roosa wished to make some remarks, but was decided by the *Chair* to be out of order. An appeal was taken and the *Chair* sustained.

The *President* announced that no member was eligible for office or could vote whose annual dues remained unpaid.

Dr. Harwood declared his ignorance as to whether he was or was not indebted to the Society, as he had received no bill.

The *Treasurer* stated that bills *had* been sent to all the members, and that most of them had been paid.

VOTING.

The *President* appointed Drs. Finnell, Roosa, J. L. Brown, and Newman, to act as tellers; and the Society proceeded to the election of officers for the ensuing year.

During the process of counting ballots, the *President* invited Dr. Stephen Smith to address the Society on the subject of Public Hygiene.

Dr. Smith, acknowledging the honor of the invitation, said that he would briefly state the history of the recently-organized Public Health Association. The progress of sanitary knowledge has lately been very remarkable. Within the last quarter of a century, Preventive Medicine has acquired the rank and dignity of a science. In European States, and in Great Britain especially, it has been incorporated into State and municipal organizations as an essential feature of good government. This great and important advance of sanitary science, and the recognition of its claims by the State, are entirely due to the medical profession. Those students who have recently given such expansion and precision to our knowledge of physiology, pathology, and organic chemistry, have laid anew the foundations of Preventive Medicine. Many of the most capable have entered the service of the State, and are now

engaged in applying its principles to practice in the promotion of the public health. In Great Britain especially, the sanitary branch of the government is daily growing in importance, and engaging the attention of the ablest medical minds. Simon, Farr, Burdon-Sanderson, Thudichum, Lethely, Gardner, Seaton, Mapother, are but a few of the names, familiar to all, of gentlemen whose services are now given almost exclusively to the government.

This advance of sanitary knowledge abroad naturally excited much attention in this country, and led to the organization of the Sanitary and Quarantine Convention. This body had four annual sessions, and by its discussions and publications excited a wide-spread interest upon the subject of the prevention of diseases.

And though this Society, from the very nature of its organization, was incapable of giving a scientific or permanent character to its work, it nevertheless gave a powerful impulse to the cause of sanitary reform in the United States. Especially was the public mind awakened to the value and necessity of a sanitary element in municipal governments. Indeed, it is questionable if the public is not more impressed with the importance of health organizations than the profession at large. Certain it is that in all the States sanitary legislation is readily obtained, and Boards of Health, State and municipal, are multiplying in every part of the country.

It is now about ten years since the Sanitary and Quarantine Convention ceased to exist—ten years fruitful in the results of sanitary organization and work. Meantime each laborer in this new field has stood comparatively isolated and alone, with none to counsel or aid him in seasons of great emergency, and in the discharge of most responsible duties. Very naturally this has led to a general desire, on the part of those especially interested in sanitary studies and labors, for an association which should be the medium for conference and co-operation, and for the organization of efforts to secure the greatest possible efficiency. To this end a preliminary meeting was held in New York on the 18th of last April, and a committee was appointed to prepare a plan of organization. A second meeting was held at Long Branch, N. J., September 12th, at which a constitution was adopted and a permanent organization effected, with the title of "The American Public Health Association." Its membership is elective.

The objects of this Association are the "advancement of sanitary science, and the promotion of organizations and measures for the practical application of public hygiene." It will aim to secure proper sanitary legislation in the different States; to establish a uniform system of registration; to promote co-operation among health authorities in sanitary administration, and especially in the adoption and enforcement of preventive measures on the approach and during the prevalence of epidemics; to improve quarantine regulations; to give a larger and more permanent medical element to health organizations; to diffuse popular information in relation to hygiene, etc., etc. It proposes, also, the establishment of a National Sanitary Bureau in connection with the general government, not unlike the Bureau of Agriculture and Bureau of Education, which shall be devoted to the collection and diffusion of information on all matters pertaining to the public health. The field of labor upon which this Association has entered is large and important, and its work can but enlist the sympathies and support of the medical profession.

The Association proposes to hold its first session at Washington in the latter part of next February, when several reports on important subjects will be presented, and its future policy will be more fully developed.

The President remarked that the probable reason why the public place more emphasis than the medical profession do upon the importance of preventive medicine is, that, as in most instances in which they have any opinion on professional matters, they are *sure*, when physicians are in doubt and in the dark, this may be especially the case in the matter of hygiene, which has a personal interest for everybody. Almost every one has something to say on the subject, and the more there is said the more certain they are that their opinions are correct. Without doubt the profession is called upon to prevent disease when it is possible to do so, and he was of the belief that this duty is fulfilled in many instances where it is practicable; as, for instance, when instruction is given with regard to the feeding of infants. As a body, however, he believed physicians in this country needed to pay more attention to the causes of disease, especially in cities.

Dr. Roberts thought the main difficulty lay in the fact that in the matter of hygiene the public was not willing to be taught, and mentioned, as an illustration, the manner in which vaccination as a preventive of small-pox had been opposed, and the way in which charlatans and irregular practitioners succeeded in this country.

Further discussion was interrupted by the announcement of the ballot, which resulted as follows:

For *President*, Ellsworth Eliot; *Vice-President*, H. B. Sands; *Recording Secretary*, A. E. M. Purdy; *Corresponding Secretary*, F. A. Castle; *Treasurer*, Joseph E. Janvrin; *Censors*, Drs. A. Jacobi and J. C. Peters; leaving three *Censors* and a *delegate* to be elected.

Dr. Henry said he had no desire to cavil, but would like to know by what authority Drs. James L. Brown and Robert Newman sat with the tellers to take tally and destroy votes. He had attended a great many meetings, and had found it customary to announce the number of votes for each candidate, and had never known tellers to be intrusted with the responsibility of destroying ballots. To which the *Chair* replied that Drs. Brown and Newman had been appointed by himself in the same manner as the other tellers; and as regards the destruction of ballots, when a ballot had the names of more candidates than there were offices, it was evidently worthless as regards a choice, and had been destroyed.

Dr. Finnell asked the opinion of Dr. Van Kleek, who had for many years been conversant with the customs of the Society regarding the habit of destroying at once irregular ballots. To which Dr. Van Kleek responded, that it had always been the custom to do so in this Society.

Dr. Henry, on the contrary, had *never* known it to be left to the tellers to decide.

The *Chair* then decided this action on the part of the tellers to have been in order. (Applause.)

A second ballot resulted in the election of Erskine Mason as *Censor*, and C. W. Packard as Delegate to the State Society.

The third ballot for censors completed the election by Drs. H. T. Hanks and S. C. Finnell receiving the greatest number of votes.

On motion, the annual meeting was adjourned until the evening of the fourth Monday in November, previous to the stated meeting of the same date.

Detroit Academy of Medicine.—The annual meeting of this Society was held September 10th, and the following officers were elected for the ensuing year: *President*, Dr. J. F. Noyes; *Vice-President*, Dr. C. B. Gilbert; *Secretary*, Dr. A. B. Lyons; *Treasurer*, Dr. W. O. Gustin.

Correspondence.

THE MEDICAL REGISTER AND ITS RESPONSIBILITIES.

To the Editor of the Medical Record.

Sir:—The leader in your number for October 15th, 1872, calls for some statements from the Medico-Historical Society, which will make more intelligible the principles governing its action in preparing the list of physicians published in the *Medical Register*.

The candid spirit with which you have ever reviewed the relations of our Society and its publications to the medical profession, and your cordial recognition of the arduous nature of, and difficulties incident to our self-imposed work, make the tender of such explanations equally a pleasure and a duty.

A physician, having a diploma from a college recognized by the American Medical Association, who has always conformed to its Code of Ethics, is invariably admitted to the list.

If he have been guilty of violating any part thereof, and desires to be ranked as a reputable physician, as not infrequently happens, it is necessary that he should join some medical society having power to enforce discipline.

If a physician keep a drug-store for the sale of legitimate medicine only, his name is not excluded from the register; but when he deals in Brandreth's Pills, Mrs. Winslow's Soothing Syrup, or any other nostrums, sharing in the profits with their proprietors, he thereby forfeits his claim to recognition among his professional brethren.

It may not be amiss to state that several physicians have discontinued this discreditable practice, and their names now appear in the list.

Others, while forced by various circumstances to continue for a time this questionable way of earning their "bread and butter," have acknowledged the justice of the course adopted by the Society.

The Academy of Medicine will not now admit to fellowship any physician who keeps a drug-store.

The County and Pathological Societies exclude all nostrum-dealers from membership.

If the Medico-Historical Society be wrong in this course, it certainly is in good company.

In proof of our discrimination, it is proper to mention that our medical societies have not, with a single exception, admitted to membership any physician whose name is not in our list.

The same facts which were to us conclusive of irregularity, they have found well established.

All of these societies exercise great caution in the admission of members, yet membership in any or all of them is not a sufficient guarantee of respectability, for it is well known that some, after admission, become unworthy of the honor which they are allowed to retain.

For instance, one, now a member of several societies, was dismissed from a very respectable organization for taking bribes; another, at a meeting of a medical society, boldly avowed that he consulted with homœopathists or any other persons who sought his advice: another is the proprietor of a drug-store; and yet another adopted as an associate in professional practice, one who he well knew was not a graduate of any college.

With such facts as these, the editor of the Medical Record will have no difficulty in making the "thread of his argument intact."

The Society has always thankfully received suggestions from, and sought the advice of members of the profession whose integrity and judgment entitled them to respect; and their cordial encouragement and commendation most generously bestowed, have been the most welcome reward of its arduous labors.

Our example has been followed in other cities, the work in several instances having been done by a single physician.

Yours truly,

W. T. White, M.D.,
President Medico-Historical Society.

New York, Oct. 28th, 1872.

CARBOLIC ACID INTERNALLY.

To the Editor of the Medical Record.

Sir:—In looking over my case-book, I see that in several instances in which I have used carbolic acid internally during a few years past in painful diseases, the administration has been followed by a diminution of pain. Used externally, its analgesic properties are already recognized. Surgeon J. H. Bill, U. S. Army, in a communication to the *American Journal of Medical Sciences* for October, 1870, claims that it can be used locally to deaden the sensibility of the skin for surgical operations. Dr. A. H. Smith confirms its value in this respect.

My own experience would also agree with that of Dr. Bill, that employed internally, it seems to act "at least as a moderator of pain in cancer."

I would therefore venture to suggest it as an internal remedy for the relief of pain. To call it a *peripheral analgesic* would be to give it an odious name, not descriptive of essential effects, although expressive of results which it apparently produces.

When I have used it, it has been almost always in a solution of the sulphate of quinine. It is well to know that a minim of the liquefied crystals weighs about one grain, and from half a minim to a minim three times daily is the commencing dose. This may be gradually increased, although the remedial effects do not seem to correspond with the increase. Not more than one or two drops should be given in the tablespoonful of fluid.

Respectfully, yours,

F. A. Burrall, M.D.

ARMY NEWS.

Official List of the Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 19, 1872, to November 4, 1872, inclusive.

Milhau, J. J., Surgeon.—Granted leave of absence for thirty days, with permission to leave the limits of the Department. S. O., 230, Department of the South, October 26, 1872.

Randolph, Jno. F., Surgeon.—To report in person to the Commanding General Department of the Platte for assignment to duty. S. O., 269., War Department, A. G. O., October 29, 1872.

Goddard, Chas. E., Surgeon.—Granted leave of absence for twenty days. S. O., 200, Department of the East, October 19, 1872.

Tilton, H. R., Assistant Surgeon.—Granted leave of absence for thirty days. S. O., 213, Department of the East, November 2, 1872.

Horton, S. M., Assistant Surgeon.—Granted leave of absence for eighteen days, to take effect on arrival of Acting Assistant Surgeon Buffington at Fort McKavett, Texas. S. O., 184, Department of Texas, October 17, 1872.

Gardner, W. H., Assistant Surgeon.—To accompany companies of 6th Cavalry constituting garrison of Fort Riley, Kansas, to that post. S. O., 161, Department of the Missouri, October 16, 1872.

De Witt, Calvin, Assistant Surgeon.—To report to Major John C. Tidball, 2d Artillery, to accompany his command as far as Raleigh, N. C., via Omaha, Nebr.; on completion of this duty to return to San Francisco, and report to the Medical Director, Department of California. S. O., 197. Military Division of the Pacific, October 25, 1872.

Monroe, F. Le B., Assistant Surgeon.—Assigned to duty at Raleigh, N. C. S. O., 224, Department of the South, October 19, 1872.

Lauderdale, J. V., Assistant Surgeon.—Relieved from duty at Fort Wood, N. Y. H., and assigned to duty at Fort Hamilton, N. Y. H. S. O., 201, Department of the East, October 21, 1872.

Harvey, P. F., Assistant Surgeon.—To report at St. Louis Depot, Mo., to accompany recruits to Texas, and on completion of this duty to join his proper station. S. O., 259, Headquarters of the Army, October 19, 1872.

King, W. H., Assistant Surgeon.—Granted leave of absence for thirty days, with permission to apply at Headquarters Mil. Division of the Mo., for an extension of thirty days. S. O., 169, Department of the Mo., October 19, 1872.

Cowdrey, S. G., Assistant Surgeon.—Leave of absence extended twenty days. S. O., 98, Military Division of the Mo., October 18, 1872.

Ewen, C., Assistant Surgeon.—Granted leave of absence for four months. S. O., 262, War Department, A. G. O., October 23, 1872.

Medical Items and News.

Dr. J. Byrne, of Brooklyn, has contributed an excellent article on "Electric Cautery in Uterine Surgery," which although intended for this issue, has with others been crowded out. We shall commence its publication in our next.

For Keeping Pathological Specimens.—Dr. J. R. Shelienberger writes: For keeping pathological specimens I employ the following: Common table salt, ℥ iv.; powdered alum, ℥ ij.; bichloride of mercury, gr. ij.; water, pure, O ij.

If the preparation is delicate take four pints of water. If it contains any osseous tissue leave out the alum, and double the salt according to formula first.

Bellevue Hospital Medical College.—The introductory to the regular course of lectures was delivered by Professor Austin Flint, M.D., at the College, October 16th, 1872.

American Dental Convention.—At the eighteenth annual session of this association, held in Boston August 13th, 14th and 15th, 1872, the following officers were elected for the ensuing year: *President*, Dr. J. J. Wetherbee, of Boston; *Vice-President*, Dr. G. A. Mills, of Brooklyn, N. Y.; *Recording Secretary*, Dr. Cornelius S. Hurlbut, of Springfield, Mass.; *Corresponding Secretary*, Dr. M. S. Dean, of Chicago; *Treasurer*, Dr. John Allen, of New York City; *Executive Committee*, Drs. J. G. Ambler, C. F. Rich, Wm. Dutch, H. F. Bishop, and C. M. Bailey.

The Journal of Psychological Medicine.—The October number of this journal contains an interesting clinical lecture by W. A. Hammond, M.D., on "Cerebral Hæmorrhage" and "Hæmatoma of the Dura Mater," and an important paper by A. O. Kellogg, M.D., styled "Epilepsy and its Relations to Insanity, and Cases of Doubtful Responsibility before Judicial Tribunals, with remarks on Expert Testimony."

Tennessee Opium.—The opium obtained from the imported seed of the white poppy, which was planted by Dr. Pitts, in the spring of 1871, near Nashville, Tennessee, possesses the peculiar narcotic odor and bitter taste, and presents a smooth, tenacious mass of a dark-brown color. One hundred grains, when dried, yielded eighty-three of powder, and, upon examination, eleven of insoluble matter, mostly clay and sand, and ten of alkaloids, equal to about nine grains of morphia. —*Nashville Jour. Medicine and Surgery.*

New York City Sanitary Inspector.—The Board of Health, at a recent session, appointed Dr. E. H. Janes, City Sanitary Inspector, the duties of which position he has ably filled since the resignation of Dr. Moreau Morris. An excellent appointment.

Summer Temperature of San Francisco.—The warmest noon-day temperature at San Francisco in July was 69°, with the exception of a single day, when it was 71°. The coldest was 60.° The hottest noon-day temperature of July at Philadelphia was 98°, and the coldest 69°.—*Pacific Medical and Surgical Journal.*

The French Faculty of Medicine, of Strasbourg, has, at length, been transferred to Nancy.

Cholera Infantum on the Pacific Coast.—This disease is almost unknown, either in the ocean climate or the heated interior.

Pregnancy in advanced Age.—Dr. Anderson, of Louisville, Kentucky (Med. and Surg. Reporter, Sept. 28, '72), mentions the case of a woman, aged 51, who was delivered at full term, by a midwife, of a still-born child. Dr. Speed stated that he was once called to see a lady, 53 years of age, who was in labor, which ended safely to both mother and child.

Harlem Medical Association.—At the monthly meeting of this association, the following officers were elected for the ensuing year: *President*, J. O. Farrington, M.D.; *Vice-President*, A. D. Rockwell, M.D.; *Secretary*, H. C. Forbes, M.D.; *Treasurer*, M. McLean, M.D.; *Trustees*, Drs. John Shrady, H. L. Sheldon, and H. H. Gregory.

Philadelphia College of Pharmacy.—Professor Wm. Procter, Jr., has been unanimously elected to the chair of Pharmacy in this institution, made vacant by the death of Professor E. Parrish on September 9th, 1872.

Niemeyer's Library.—Albert Moses, a bookseller of Tübingen, has purchased the valuable library of the late Dr. Felix Von Niemeyer, and offers the profession an opportunity of rescuing the whole or part of this collection. The library has been arranged with the same headings as are found in the "practice" of Niemeyer.

Vigla.—Eugena Napoleon Vigla, Physician to Hotel Dieu, died recently in Paris, of disease of the heart, in the 59th year of his age.

American Pharmaceutical Association.—At the twentieth annual meeting of this association, held in Cleveland, Ohio, September 3d, 4th, 5th, 1872, the following officers were elected for the ensuing year: *President*, Albert E. Ebert, Chicago, Ill.; *Vice-Presidents*, S. S. Garrigues, Ph. D., Saginaw, Mich., E. P. Nichols, M.D., Newark, N. J., H. C. Gaylord, Cleveland, Ohio; *Executive Committee*, Thos. S. Weigand, Phila., Pa., Geo. Leis, Lawrence, Kansas, C. S. Eberle, Phila., Pa., H. J. Menninger, M.D., Raleigh, N. C., Prof. John M. Maisch, Phila., Pa.; *Treasurer*, Chas. A. Tufts; *Local Secretary*, Thos. H. Hazard, of Richmond, Va., Prof. Robert Bentley, of London, England, and Stanislaus Martin, Paris, France, were elected *Honorary Members*. The next meeting will be held in Richmond, Va., Sept. 18, 1873.

Sewing-Machines on the Health of Operators.—Dr. Arthur H. Nichols (*Report of the Mass. Board of Health*), arrives at the following conclusions with reference to the influence of sewing-machines, driven by foot-power, on the health of operators: 1st.—A healthy woman may use the sewing-machine for three or four hours daily, without evil results. 2d.—The prevailing illnesses are :—Indigestion, due to constrained posture, close confinement, and defective hygienic arrangements ; muscular pains of the legs and trunk, caused by over-exertion at the treadle ; uterine and ovarian disorders, aggravated, though not originated, by this occupation, and alleviated by its discontinuance ; general debility, the result of overwork and confinement.

The neuralgic affection of the feet noticed by M. Guibont, and attributed by him to these parts with the iron treadle, is pronounced extremely rare.

Prof. Agassiz's Expedition.—At the welcome extended to Prof. Agassiz, by the California Academy of Sciences, on his arrival at San Francisco with the Hassler Expedition, the speaker reported the following results of the Expedition: During the 246 days of the voyage there were packed 242 boxes and barrels of specimens. The materials collected will oblige the trustees of the Museum at Cambridge, Mass., to build an extensive addition. The collection of fishes amounts to about 30,000 specimens. He has no doubt that the sum total of specimens brought together exceeds 100,000, and they are not preserved in the old-fashioned way—dried and unfit for further research. To pack these specimens 3,000 and odd gallons of alcohol were used up, and they are so preserved they will afford materials for investigation for years to come.

N. Y. Ophthalmic and Aural Institute.—The Third Annual Report gives the following exhibit: For the year commencing May 1, 1871, and ending April 30, 1872, the number of patients treated in the Dispensary was 3,225, of which 2,566 had diseases of the eye and 659 diseases of the ear. Since the opening of the institution 8,168 persons have been treated in the Dispensary, namely: 6,419 for diseases of the eye and 1,749 for diseases of the ear. The number of operations performed in the Institute during the year was 424, of which 379 were for diseases of the eye and 45 for diseases of the ear. Of the more important operations the following are specially mentioned: For cataract, 52; artificial, 62; squint, 175. Many surgical instruments and a complete electro-therapeutical apparatus—comprising Brenner's apparatus for the electric treatment of ear and eye diseases, faradaic machines, and Middeldorpf's galvano-caustic apparatus—have been added to the collection of the institution. Dr. Jos. Aub, late Resident Asst.-Surgeon, has been appointed Ophthalmic and Aural Surgeon to the Cincinnati Hospital, his native city. The medical officers are: Dr. H. Knapp, *Surgeon-in-Charge*; Dr. Thomas R. Pooley, *Asst.-Surgeon*; Dr. Emil Gruening, *Asst.-Surgeon*; Dr. Xen. C. Scott, *Resident Asst.-Surgeon*; J. A. Steurer, *Clinical Assistant*; Dr. Chas. S. Turnbull, *Clinical Assistant*.

Wisconsin State Medical Society.—At the regular annual meeting of this Society, held at Fond du Lac, the following persons were elected officers for the ensuing year:

President—Dr. H. Van Dusen, of Mineral Point.

1st Vice-President—Dr. E. L. Griffin, of Fond du Lac.

2d Vice-President—Dr. John Dickson, of Allen's Grove.

Secretary and Treasurer—Dr. James T. Reeve, of Appleton.

Censors—Drs. D. Mason, N. Dalton, and J. K. Bartlett.

The next meeting of the Society will be held in Milwaukee, on the third Wednesday of June, 1873.

Marshall Infirmary, Troy, N. Y.—This Institution has the oldest lunatic of any other asylum in this State—the patient, a male, being about ninety years of age. He is in the violent ward, and was made insane about two years of age, by overdosing with opium. His head is uncommonly large. He was described as being a bright little boy until the opium was given him to procure sleep.

The London Hospitals.—E. H. Trenholme, M.D., writing to the *Canada Medical Record*, of September, 1872, says that the greater proportion of the London Hospitals are supported by voluntary contributions, and he is informed by medical men connected with these institutions, that there is scarcely a family in London but contributes largely each year, and that they consider the Hospital subscription a debt of honor.

As to the practice of the Hospitals, he remarked *en passant*, that carbolic acid is almost entirely discarded in all these institutions. St. Thomas's clings—but very gently—to it still; probably because Prof. Lister was one of her pupils, and his bust adorns her halls. He has no doubt but that in another year or so it will be quite numbered with the things that are past. Dr. Richardson declares that of some forty disinfectants it stands lowest.

With regard to the eye there is much to be learned that is new at Moorfields, and the eye department at Guy's and St. Thomas's Hopitals. At St. Mark's Hospital for the treatment of fistula, he was much struck with the extent to which the knife is used. It is not uncommon to see five or six sinuses laid open at once, sometimes even to the depth of two or more inches. Mr. Bryant, of Guy's Hospital, informed him that the surgeons had had seventy consecutive successful cases of operating for stone, in children under ten years of age. This surgeon was of the opinion that the practice of using *always* the straight staff had something to do with their success.

Internal Pathology.—Don José Zalabardo, of Madrid (Siglo Medico), announces a work on "Internal Pathology," in verse, which will be abreast of the present state of science.

Mental Disease Prize.—M. Tarlet has made a bequest of 10,000 francs to the Paris Academy of Medicine, for the purpose of founding a prize on mental and nervous diseases.

A Novel Disinfectant.—Mrs. Bountiful goes to visit the gardener's wife, who was just confined. "Glad to see you and the dear baby so well, Mary; but—hem, ha—I think, perhaps, you are a little *close*, and I shall send you some chloride of lime to put in a saucer under the bed." Mary.—"Oh, please missus, don't go to make me have no more of them stinks; musses breath'll keep hof anythink that thar fly through the hair."—*Med. Times and Gazette.*

Board of Health for Boston.—According to the *Boston Medical and Surgical Journal*, of Sept. 26th, great progress has been made toward the institution in Boston, Mass., of an independent and competent Board of Health. A city of 250,526 inhabitants, or the seventh in population of American cities, surely demands an enlightened Board of Health.

Duty on Drugs.—The following crude articles are subject still to U. S. duty; Opium, which pays a specific duty of $1.00 per pound; as afœtida, 20 per cent., ad valorem; Barbadoes tar, 20 per cent.; lime juice, 10 per cent.; quicksilver, 15 per cent. The duty of $3.00 per pound on vanilla beans will be taken off August 1st, 1873.

Aloes.—During the past year, 22,000 lbs. of the various grades of aloes were entered at the Custom House of New York.

California College of Pharmacy.—This institution was incorporated August 17th, 1872, with a capital stock of $100,000; its duration to be fifty years, and location in the City and County of San Francisco, and with the following officers and trustees: Wm. T. Wenzell, *President*; J. Winchell Forbes, *Secretary*; J. G. Steele, *Treasurer*. The first course of lectures on Materia Medica, Pharmacy, Chemistry, and Botany, commenced October 1st, 1872.

Dr. Vulpian is to occupy the chair of Comparative and Experimental Physiology, vacated by Dr. Brown-Séquard and Dr. Charcot, physician to Salpêtrière, and, with the other gentlemen just named, editor of the *Archives de Physiologie Normale et Pathologique*, will probably take the chair of Pathological Anatomy left vacant by Prof. Vulpian. Dr. Hourteloup, formerly surgeon to the Hôtel Dieu, is dead.

Aggravated Form of Syphilis.—The inhabitants of Fiume, in Illyria, are the subjects of a hideous ulcerative disease, which affects the nose and face especially, and is known as *Schiultro*, the name of the village where it appeared about the end of the last century. At a recent meeting of the Académie de Médecine, Dr. Barth presented drawings and a description of the disease, which appears to be a modified form of syphilis, aggravated by the circumstances of soil and climate, and the absence of medical advice and measures of hygiene.

Enormous Brain in a Boy.—A boy, thirteen years of age, recently died in the Middlesex hospital, London, from injuries caused by a fall from an omnibus. His brain after death was found to weigh fifty-eight ounces, about eight ounces above the average male adult brain. The lad had been particularly healthy, without any evidences of rachitis, and was very intelligent.

Two Unsuccessful Cases of Treatment of Rheumatism by the Cold Bath were recently reported at the Clinical Society of London.

Dr. George A. Mursick of Nyack, was expelled from the Rockland County Medical Society at its semi annual meeting at New City, October 29, 1872. The principal cause of the expulsion was the publication in a county newspaper of the following libellous and defamatory advertisement concerning three members of the said society:

"*Take Notice.*—Dr. George A. Mursick desires to inform the public generally, that he holds no association, professionally or otherwise, with those unprincipled scoundrels, and professional jerry mididdlers, Smith, Polhemus, and Stevenson."

The course taken by the members was in our opinion eminently just, and shows a healthy state of professional discipline. The society evidently knows its duty, and is not afraid to perform it. Let other similar organizations throughout the country follow this good example.

Double Uterus and Vagina.—Dr. N. C. Powers, of Syracuse, New York, has a case of double uterus and vagina under observation. The septum vaginæ is complete throughout, and the uteri are entirely distinct, each performing the menstrual function.

Clinical Charts.—Dr. William W. Keen, of Philadelphia, has devised some excellent clinical charts of pocket size. One of these comprises the front, back and two side views of the body with the outlines of the skeleton, also the same kind of view of the upper and lower extremities, the feet and head. The object of these delineations is to aid the student and practitioner in locating disease with ease and accuracy, at the same time saving a great deal of word description. Accompanying is also an exceedingly well-arranged and comprehensive chart of the temperature, pulse and respiration. We cannot speak too highly of this method of studying disease, and cordially recommend Dr. Keen's plan to the attention of every progressive practitioner. We should like to see charts of the viscera on the same plan.

The charts are published by Turner Hamilton, of Philadelphia, and their execution is admirable.

New Publications.

Books Received.

The Physician's Visiting List for 1873. Philadelphia, Lindsay and Blakiston.

A Practical Treatise of Urinary and Renal Diseases, including Urinary Deposits, etc., by Wm. Roberts, M.D., Fellow Royal College Physicians, London. 2d American Ed. from 2d London Ed. Philadelphia: H. C. Lea. 1872.

Lessons in Physical Diagnosis, by Alfred L. Loomis, M.D., Prof. Inst. and Pract. Med. Dept. Univ. N. Y. 3d Ed., revised and enlarged, New York: W. Wood & Co. 1872.

Small-Pox, the Predisposing Conditions and their Preventives, etc. By Carl Both, M.D. 2d Ed. Boston, Alex. Moore. 1872.

Treatment of Diseases of the Skin, with an Analysis of Eleven Thousand Consecutive Cases, by Dr. McCall Anderson. London: Macmillan & Co. 1872.

Annual Report of the Commissioners of Charities of King's Co. 1872.

Proceedings of the Pathological Society of Philadelphia, vol. III. Philadelphia: Collins, Printer. 1871.

Modern Medicine: A Lecture delivered Oct. 7, 1872, introductory to the course at the Jefferson Med. College, by J. M. Da Costa, M.D., Prof. of Medicine. Philadelphia: J. B. Lippincott & Co. 1872.

Original Communications.

CLINICAL NOTES

ON THE

ELECTRIC CAUTERY IN UTERINE SURGERY.

By J. BYRNE, M.D.,

SURGEON-IN-CHIEF TO ST. MARY'S HOSPITAL FOR DISEASES OF WOMEN; CLINICAL PROFESSOR OF UTERINE SURGERY TO LONG ISLAND MEDICAL COLLEGE, ETC.

A few months ago, at a meeting of the New York Obstetrical Society, Dr. Chamberlain reported a case of epithelioma of the cervix uteri in which, though the affected part had been very satisfactorily removed by galvano-cautery, the disease had nevertheless reappeared within five or six weeks after the operation. Other instances also were referred to, where an equally unsatisfactory result had followed this method of operating; and the prevailing opinion of members present appeared to be that the removal of such outgrowths from these parts, even by the cautery, offered but little encouragement as a curative measure, and that reported successes were at best exceptional, or of rare occurrence, if not doubtful as to diagnostic accuracy.

Indeed, whether on account of disheartening experiences then related, or the well-known difficulties attending the management of galvanic batteries, there seemed to be, if not a disposition to doubt the utility of resorting to any operation in such cases, at least a strong desire to have the subject more fully presented. With a view to supply this want in some measure, and especially as I had referred more encouragingly to my own observations in the use of the galvanic cautery, I was requested to furnish a paper, which was read at a meeting of the Society held in June last.

Experiments undertaken over two years ago, and noticed on the occasion referred to, have been steadily continued during this interval, and cases of great interest, in which I have operated by this means, have since presented themselves.

Thus, while I have succeeded in devising a compact and effective galvanic battery suited to every surgical emergency, and yet comparatively simple in its management, together with improved electrodes and platina instruments, ample opportunities have been afforded from time to time for practically testing the value of each novelty as suggested. This is my apology for delaying the publication of my paper until this time.

No surgeon who, having witnessed for the first time a successful intra-vaginal operation by the galvanic cautery,—for example, the removal of a cauliflower cancer, or a fibrous polypus from the cervix uteri—can have failed to appreciate the many advantages offered by this safe and rapid, yet bloodless proceeding, over all other means heretofore at our command. He might also feel astonished that so admirable a method of conducting these and similar operations had not been more generally adopted by gynæcologists especially, or the subject even assigned a few pages in works on that specialty; for a late edition of one of the most practical, if not the very best treatise on diseases of women, is in this particular noticeably defective.*

A very little reflection, however, will soon convince him that, after all, neither authors nor any one class of practitioners in particular are much to blame; for even the laws by which galvanic electricity is governed, not to speak of its adaptation to the most delicate and difficult operations, are nowadays but seldom made the subject of scientific inquiry either by candidates for medical honors or practitioners generally. And yet, strange as it may appear, the history of galvano-cautery, though consisting, for the most part of clinical fragments merely, or an occasional report of some chirurgical achievement, covers a period of over a quarter of a century. It is true, but little was heard during the first few years of the new service which the thermal power of current electricity was being made to render; for prior to 1850 almost the only surgical uses which it seems to have served, with the exception of Crussel's operation for a fungus hæmatodes, were the removal of nævi, and the destruction of dental nerves. It may be safely asserted, however, that we are indebted for most of what is even yet known of galvano-cautery to the ingenious devices of Marshall and Ellis, in England, from 1850 to 1852, and the subsequent publication, in 1854, of Middeldorpff's more brilliant exploits in Germany. Since the latter period, many interesting reports of cases by Semeleder, Newman, Zsigmondy, Braun, Von Grenewald, Rudolph Voltolini, and others, have appeared, but there is nothing in the valuable yet only corroborative experiences of these observers to warrant a doubt that the claim of priority in originating all that is of practical value in electro-cautery, belongs of right to those first named.* To Ellis, especially, is due the credit of first suggesting the spiral cauterizer; Marshall and Middeldorpff, contemporaneously, though independently, devised the loop; while all clearly and distinctly indicated the various lesions likely to be benefited or cured by the employment of their several contrivances.

It is not a little surprising, therefore, to notice how few surgeons there are, comparatively, even among gynæcologists, who have adopted the practice, or given the subject any attention whatever, though more than twenty years have now elapsed since its claims were so attractively demonstrated. That this omission arises, in a great measure, from the want of any reliable guide to a practical study of the subject, there can be little doubt; because, as has already been intimated, any one who desires accurate information, or such definite rules and directions as will enable him to operate successfully by means of the electric cautery, will seek such aid in vain among the gynæcological records, or other medical literature of our language at least. The brief allusions met with in standard works on medical electricity and electrolytic surgery, will avail but little in a practical sense, beyond what relates to the elementary principles of electro-physics. As for practical hints, and that particular kind of knowledge so needed for conducting important cautery operations, there are but two ways in which such can be obtained: either by being fortunate enough to have repeatedly witnessed and closely observed such operations, or through laborious experimental research and no trifling pecuniary outlay. By this latter path I have been obliged to travel; and though fortified by a tolerably exact knowledge of electro-physics, and constantly aided by material for clinical study, yet many disappointments, and diffi-

* The two pages devoted to galvano-cautery in the work of Professor Thomas, to which I refer, must have at least one good effect,—that of inciting the reader's desire to know something more of the subject.

* In this country, also, many important galvano-cautery operations have been performed within the last few years by Drs. Noeggerath, Thomas, Guléke, Sims, Jacobi, and others, but few of which, however, have been published, so far as I know.

culties of a perplexing nature have had to be at first contended against.

This statement is made, not with a view to herald my own industry or perseverance, but merely as suggestive of additional reasons why galvano-cautery, which is destined at no distant period to play a most important part in gynæcological practice, is so little understood, and so seldom resorted to. It is also reasonable to infer from what has been said, that many of the unsuccessful attempts to operate by galvano-cautery of which we hear, as for example when the battery is said to have "given out" at a critical moment, have been due less to imperfections in the apparatus, than a want of experience and inadequate knowledge of electro-physics on the part of the operator.

It will be found impossible to construct any galvano-electric apparatus which may not occasionally become defective, either by accidental displacement of some of its parts, or imperfections resulting from use. The well-ascertained laws, also, in accordance with which the electric fluid is generated and set in motion, demand the strictest observance, and will tolerate no innovations incompatible therewith, either as regards the relation of negative and positive elements to each other, and their metallic connections, or the quantity and kind of fluid or fluids by the aid of which electro-motive force is to be obtained.

Consequently no surgeon can hope to succeed in the practice of electro-cautery unless, when difficulties arise, as in case of failing to obtain sufficient heat, he is not only competent to fully appreciate and understand the nature, causes, and extent of such interruptions, but also possessed of a certain amount of mechanical aptitude, so as to enable him to remedy the defect. Indeed, I have no hesitation in stating that these conditions are essential to success, and cannot be safely dispensed with; because, though certain rules may be laid down concerning the general management of batteries, and even specific directions given as to the proper manner of conducting cautery operations, nothing short of a tolerably exact scientific knowledge of the whole subject will suffice to overcome unavoidable obstacles.

Hence, it is not unreasonable to infer, that had these facts been earlier recognized, many of the troubles and disappointments reported in the practice of eminent surgeons might have been avoided, nor would a quarter of a century have elapsed ere galvano-cautery, instead of being understood and practised by comparatively few, had become the usual, and not the exceptional means by which certain diseased conditions might be cured or relieved.

Before proceeding to describe such a battery and instruments as I have found best suited to the requirements of surgical practice, some reference to the several kinds of galvanic apparatus used and recommended by others seems called for. Nearly three years ago I assisted Dr. Noeggerath in removing an epithelioma from the cervix uteri of a lady whose case will be described hereafter, and the battery used on that occasion was a zinc-carbon one, such as that first invented by Bunsen in 1843. I subsequently operated with this instrument, and was much pleased with its action in both cases, though in the latter my patient, who had a large fibro-cellular polypus attached by a thick pedicle, lost much blood, owing to the vascularity of the parts, but more particularly because the wire used was, as I believe, too fine, and perhaps also in some measure on account of traction kept up on the tumor. I remarked then to gentlemen present that vascular parts could not be safely cut through except by a much thicker wire, which I was informed the battery, though a very large one, would not sufficiently heat.

My next few operations were conducted by means of a powerful Grove battery, the only distinctive difference being that platina instead of carbon is used as a negative element, and in every respect similar to that used by Professor Middeldorpff.

This apparatus, though beautifully constructed and costly, was soon abandoned, however, mainly because of the great trouble and care needed in working it; for, like the one first used, strong nitric acid was required for the inner or porous cell, and on account of which perplexing accidents are often unavoidable. Nevertheless, being favorably impressed by what I had already observed, and influenced by the opinions of authorities against other than constant batteries, I determined to provide myself with another 8-cell Bunsen, similar in principle to that of Dr. Noeggerath, already referred to. After a few trials, however, I found it quite insufficient to heat wire of such length and thickness as would insure against hemorrhage in any but trifling operations. This defect, coupled with the danger in handling large quantities of strong nitric acid, and the suffocating nitrous fumes resulting from chemical action, not to speak of the trouble and time spent in filling, emptying, and cleaning the cells, induced me to abandon every kind of so-called constant, or two-fluid battery.

The claims of Stohrer's four-cell one-fluid carbon-zinc battery were next fully considered, but on account its huge dimensions, being less portable than any those already tried, I hesitated, and concluded to procure the French contrivance, known as the "Grenet battery." This little apparatus is composed of eight zinc and six carbon plates, four of the former being united and connected with three of the latter, similarly joined, the other sets of three and four zincs and carbons, each unitedly forming the negative and positive poles.

In this manner the whole is made to act as *two* powerful cells. I have operated frequently with this instrument, and can fully endorse the views expressed regarding its power and certainty of action by Dr. Garrett, of Boston, the only author, so far as I know, whose opinions as to its worth seem to have been derived from a practical knowledge of its capacity. After an extensive practical acquaintance with this battery it is a little amusing to recall the description given of it by Meyer, in his work on "Electricity in its Relations to Practical Medicine," as follows:—"After the battery is dipped into the fluid *as high as the upper edge of the carbon-plates*, a Y-shaped tube is fastened to the rubber tube, and to this a pair of bellows; soon the fluid is thrown into commotion, and after *four or five seconds* the platinum wire which is secured to the conducting wires going from the zinc and carbon poles, glows." None of which is correct, because neither this nor any other such battery should ever be dipped "as high as the upper edge of the carbon-plates," no bellows is needed, and the platina requires no longer time to become incandescent than when attached to any other battery that I have ever seen. I have never found it necessary to use the bellows attachment, the occasional raising and re-immersion of the battery being all that is needed to perpetuate its power. It has not, however, that "*intensity*" arrangement which many operations demand, and hence its sphere of action is too limited to be universally serviceable in practice. Moreover, the lead-lined box which contains the fluid is too large to be conveniently portable, and there is no mechanism provided for raising the battery out of the acid solution when not actually in use, and keeping it suspended so as to drain the plates, arrest chemical

action, and thereby control and preserve its heating capacity.

Being, on the whole, tolerably well satisfied with this first specimen of single-fluid battery, my next desire was to obtain one of a similar nature, but, if possible, still more powerful and less limited in its sphere of action, yet as moderate in size as would be consistent with these additional requirements.

A battery combining in a very great degree all these qualities was therefore constructed at my request by Mr. Charles T. Chester, 104 Centre Street, whose thorough practical acquaintance with electro-physics is so well known, and to whose politeness I am greatly indebted for many valuable hints and suggestions. This instrument is composed of eight pairs of carbon and zinc plates, each measuring about six by nine inches, and so arranged that the whole could be made to act either as two cells when *quantity* is desired, or four cells as when greater *intensity* is needed to overcome resistance. If short and heavy, or flattened platina is to be heated, certain binding screws marked two are turned down, while those marked four are to be raised; and when a long and comparatively thin wire, such as is used for looping purposes, is required, this order of adjustment is to be reversed. By this useful contrivance the apparatus can be made to meet every want, and in my hands it has never failed. As an evidence of its power, moreover, I may state that five inches of number sixteen wire can be made incandescent, and as the elements can be easily raised or lowered by means of a windlass attachment, its management is simple, and as a whole it is far superior, in my estimation, to the more clumsy and costly apparatus of Stohrer.

With all these attractive features, however, it also is too bulky and heavy to be conveniently portable, and consequently not so well adapted to the requirements of private as to hospital practice. The quantity of fluid required to bring it into action is three gallons, prepared by dissolving three pounds of bichromate of potassa in ten quarts of boiling water, to which, when cool, two quarts of sulphuric acid are to be added.

It will be observed from these remarks that, though double-celled batteries, whether composed of the Bunsen or Grove elements, are constant in their action, they possess no other attractive characteristic warranting a preference over the more simple and manageable single-fluid arrangements. Indeed, this supposed indispensable quality as to constancy may be conveniently dispensed with, for it is no more an essential requisite in a battery for surgical purposes, than would be perpetual motion in a time-piece.

Authorities on electro-surgery, as a rule, either caution as against the employment of these batteries, simply because they are not continuous in their action, and liable to give out at a critical moment, or furnish such an incorrect description of their *modus operandi* as to deter many from using them. They seem to entirely forget, however, or at least fail to suggest that there can be no reasonable object whatever in immersing a battery before its action is called for, or allowing it to remain so unnecessarily long, and during intervals of inspection which ought to, and must occur during every important cautery operation. Another very common and mischievous fallacy is, to suppose that by disconnecting one or other of the conducting cords, or otherwise breaking the current, as, for example, by means of a slide in the cautery-handle, we thereby arrest the waste of thermal power. Breaking the current, however, does not wholly arrest chemical action; and as prolonged immersion, even with this precaution, seriously impairs electro-motive power, no battery of this class should be put in contact with the fluid until heat is actually required, or allowed to remain so during operative interruptions, or one minute after it has served its purpose.

DESCRIPTION OF BATTERY.

Fig. 1 is a correct representation of a battery devised by me over twelve months ago, and employed in some of my most important operations.

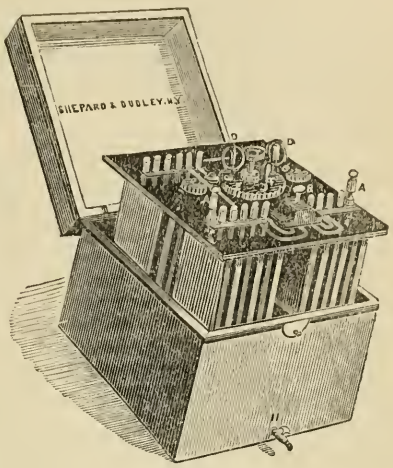


Fig. 1.

It consists of twelve carbons and twelve zincs, each 3 by 5 inches, combined and arranged so as to represent four sets or cells of three pairs each. In this order the elements are securely fastened by nuts and screws to a hard rubber platform 7½ by 8 inches in surface, and one-quarter inch thick; and the combinations and connections effected by means of narrow strips of copper annealed and nickel-plated. In the centre is a cog-wheel 3 inches in diameter, which, on being turned by means of an upright handle, causes the two water-agitators to revolve.* Near the front edge of the platform is fixed what might be properly denominated an *electro-motive*, or *electro-tension disc*, by the aid of which the whole character of the battery may be changed in a moment, so as to represent either two cells, as when quantity is needed, or four cells when great resistance is to be overcome, such as in heating a long thin wire.

The latter simple contrivance has rendered this battery, in my hands, equally reliable and powerful in every emergency, being capable of heating (white) from 6 to 8 inches of No. 16 wire (Stubb's gauge), or over 12 inches of No. 21, the last mentioned being the size which I always select for looping purposes. Passing through the centre is a square perpendicular rod notched on one side for the reception of a ratchet-spring fixed to the collar of the central wheel, and by which the battery may be easily lowered into the liquid, or raised and kept suspended at any point desired. This arrangement is much preferable to that of a screw, as in Stohrer's instrument, because the small size of my apparatus as compared with the former, enables the assistant in charge to regulate its power ac-

* The object of this arrangement is to increase the power of the battery when, owing to continued use, as in tedious operations, the fluid may become exhausted.

It is very seldom needed, but as an example of its value under certain circumstances, I may state that half-strength fluid—that is, one part of water and one of fresh ordinary battery fluid—can be made, by agitation in this manner, to produce nearly, if not quite, an equal heat with the strongest fluid without such agitation.

cording to the demands of the operator, with less delay and equal facility.

The upright rod being screwed into a transverse support in the box, can be removed when the battery is not in use.

The box is divided into two parts by a central plate, suspended above, and running from before backwards; a stop-cock is provided for drawing off the fluid and washing out the battery after being used, and the whole being made of hard rubber moulded, there is no necessity for lead or other lining.

The conducting cords ought to consist of not less than 100 strands of fine copper, or what is still better, silver wire, each cord well covered with silk or cotton in the first place, and then, as a matter of great convenience when operating, bound together by another covering to commence 12 inches from the binding-screw extremities, and to continue up to within 3 inches of the opposite ends. The latter should each be provided with a socket and sliding ring for the reception of the cautery handles, as this is a much better and less bulky manner of making connection than by binding screws as ordinarily employed.*

DIRECTIONS FOR PREPARING THE BATTERY.

The quantity of fluid required is six pints, prepared by dissolving twelve ounces of bichromate of potassa in five pints of boiling-water, to which, *when cool*, one pint of sulphuric acid is to be slowly added. Owing to the chemical heat generated by the admixture of the acid, the liquid must again be allowed to cool before using; otherwise, the zinc plates would suffer much waste, and the efficiency of the whole apparatus then and for the future be seriously impaired. Every battery ought to be carefully examined *each time* before commencing operations with it, so as to make sure that every part is in order, and that no displacement or contact of zincs and carbons has taken place since last in use. Before pouring the fluid into the box, the elements should be lifted out carefully and rested on some smooth surface, and the quantity above stated (six pints) should be measured, unless, as I have suggested to the manufacturers, a mark be placed on the inside to indicate the required quantity. The next step will be to screw on the upright rod, and suspend the battery sufficiently high to be out of the bath. The conducting cords may next be adjusted, and in doing so, care should be taken that the binding screws are turned down tightly, so as to insure perfect connection, the same exactness being also necessary in regard to the handle attachments.

FIG 2

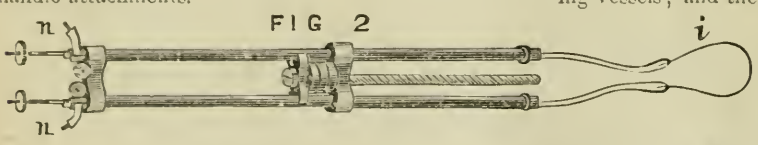


Figure 2 represents an improved loop instrument originally manufactured by Mr. Charles T. Chester at my suggestion, and is far superior to any other that I have seen used or described, for the following among other reasons: The loop is tightened by straight traction instead of being wound on a roller, and thus less likely to be impaired for future service; while the opera-glass attachment enables the surgeon to keep up a more regular and steady action than would be possible by turning a wheel. Moreover, by using such an instrument as this he will be more likely to avoid the frequent and serious mistake of cutting through the tissues too rapidly, thereby forfeiting one of the main advantages justly claimed for galvano-cautery, which, I need hardly say, is security against hemorrhage.*

Figure 3 is the spiral cauterizer which I have been in the habit of using successfully in cases of chronic inflammatory affections of the urethral mucous membrane, and as a more thorough, safe, and radical means of combating obstinate follicular disease of the cervical canal than any other caustic or stimulating application

FIG 3

heretofore employed or recommended. Within the last few months, however, I have devised and used what I consider a much better means of accomplishing the same purpose, by substituting for the spiral wire and porcelain, 5 inches of a heavier wire (say No. 16), flattened and doubled so as to nearly represent a long cylinder. In this manner the treatment here recommended may be very thoroughly carried out.

FIG 4

The cautery knife and handle are tolerably well shown in figure 4, and, as the uses to which the former is applicable will be referred to elsewhere, no description need be here given.

So also in regard to the illustrations A B C D E F G; while some will be clinically noticed hereafter, the uses which each is designed to serve can hardly fail to be understood by a moment's reflection.

It may be proper to remark, however, that the dome-shaped cauterizer D is used for the purpose of searing over surfaces from which morbid growths may have been extirpated, or stopping the open mouths of bleeding vessels; and the little knife G is that delineated in figure 10, where one of the many useful purposes to which it may be applied is plainly indicated.

In addition to the battery and electrodes herein described, it must not be forgotten that the operator will have to be provided with certain other contrivances designed especially to facilitate cautery operations, though as to their range of usefulness by no means limited to such purposes, as for example,

A SUITABLE SPECULUM.

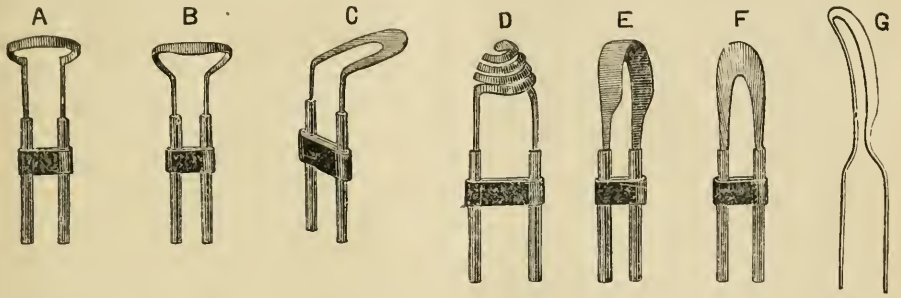
Ordinary devices of this nature, though answering tolerably well for a mere ocular examination of the cervix uteri, or routine topical treatment, will be of no ser-

* This battery, as well as every form of electrode required, is manufactured by Shepard & Dudley, 150 William Street; and for the perfect and satisfactory manner in which my instructions have been carried out, as to their construction, much credit is due to the good taste and mechanical judgment of Mr. William R. Leonard, with the above firm.

* The loop end of this instrument is somewhat different from that exhibited in the drawing, and is provided with a wooden casing to protect the sound parts from injury by reflected heat in the metallic conductors.

vice whatever for the purpose under consideration, because parts to which the actual cautery is to be applied must not only be brought well into view and within perfect control, but as far as possible isolated from surrounding structures. Besides, patients, whether anæsthetized or not, are often restless, and the slightest movement at a critical moment might seriously affect the whole subsequent proceedings, were not some provision made against all such contingencies.

Moreover, it must not be forgotten that inexperience on the part of an assistant, or the most trifling variation in the position of his hand, often rendered unavoidable by fatigue, may equally interfere with the operator's design.



If a Sims speculum be used, at least two experienced and reliable assistants will be needed, one to hold that instrument, and the other to take charge of the anterior vaginal wall, yet neither can render any other kind of aid while thus engaged. The strongest objection to its use, however, is the position in which a patient must necessarily be placed, for I contend that no uterine operation by galvano-cautery can be satisfactorily conducted unless the patient is made to assume the dorsal attitude.

Granting, then, that these views are in the main correct, and knowing from extensive clinical experience that we do possess a means by which most of the important desiderata here indicated may be obtained, any device combining properties so attractive, demands something more than a mere passing notice.

The instrument referred to, is the speculum introduced and described by me about fifteen months ago, and a modification of which is here shown* (Fig. 5).

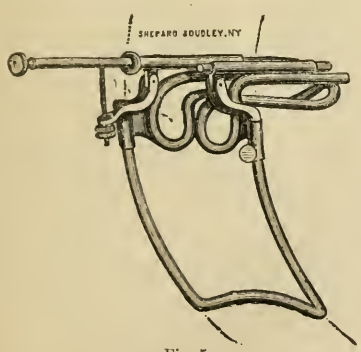


Fig. 5.

This speculum, it will be observed, differs none in principle from that previously noticed, and, as to the several pieces of which it is composed, they may be considered the same, *with one exception*, namely—the blade on which the lower or perineal blade moves is much wider and a little longer, thereby affording more working space and greatly facilitating operative manipulations. The fore-shortened view in the above sketch will serve to explain more clearly the points of difference between this "operating," and the ordinary speculum.

Some advantages, however, will be found by having the intra-vaginal parts of this instrument a little longer—say half an inch—and from one-quarter to three-eighths wider than the ordinary size. I have also occasionally resorted to a piece of bent spring wire, to be introduced after the speculum has been adjusted and the uterus fixed in position, for the purpose of still further separating the lateral walls. This, though by no means an indispensable requisite *in any case*, may nevertheless be made to render good service, under certain circumstances, and on this account I have given directions to have some such device supplied with each "*operating*" speculum.

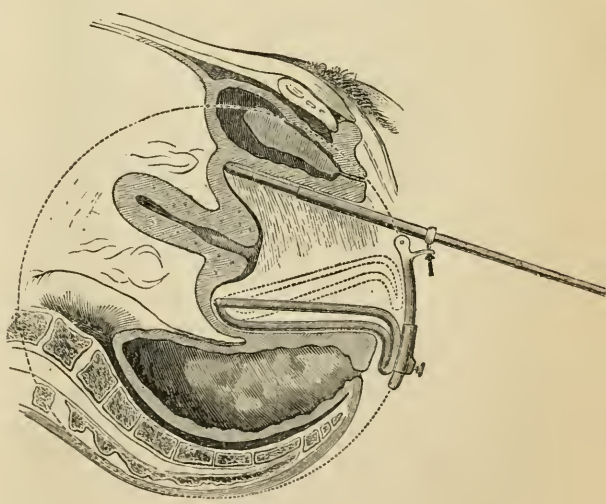


Fig. 6.

Fig. 6 is intended to illustrate more clearly the principle on which this speculum is constructed, and the *modus operandi* by which the curved vaginal canal is not merely dilated, but straightened by pressing back the perineum BELOW, while the vesical wall is elevated ABOVE. The under blade, it will be noticed, is made to move in a circle of which the centre is indicated by its point, so that the relation of the latter to the cul-de-sac, when the instrument is first introduced, does not materially change, no matter to what extent the perineal blade may be pressed backward. The various directions, too, in which the upper double rod may be made to move, is a most important feature in this instrument; for, however displaced a uterus may

* For a full description of this instrument see *American Journal of Obstetrics and Diseases of Women and Children*, for Aug., 1871.

be, more especially if anteverted, and provided no firm adhesions exist, there is no difficulty in bringing it into view, and so fixing it for examination or treatment.

The difficulties said to have been met with by some in using this instrument may, I think, be very readily accounted for, and I would submit the following as the most probable and rational explanation: In the first place, it has been found almost impossible, up to a very recent period, to get manufacturers to carry out my instructions as to its mechanism, and the consequence has been that quite a large number of imperfect instruments have found their way into the hands of practitioners. That this has been a source of serious annoyance and much disappointment there can be no doubt, for I have myself seen more than one worthless specimen; and wherever I have had the opportunity, have insisted on the purchaser's returning it. This drawback, I am told by the various makers, is now at an end, and there will be no difficulty for the future in obtaining the perfect instrument. Nevertheless, every purchaser should carefully examine to see that the principle as to circular motion, &c., is carried out, and that *the width of the upper blade is rather less than that of the lower.**

Again, it not unfrequently happens that some physicians undertake to use it without reflecting on the purposes for which it has been devised, or the directions heretofore given for its application, and as a natural consequence often blunder in adjusting it. There are others, too, I am told, who seem to have been disappointed at failing to find in this contrivance an automatic speculum, by the aid of which common sense and ordinary judgment in uterine examinations might safely be dispensed with. One of the latter class, if asked his opinion of it, will very likely reply that he could not possibly get along with it, as in his hands it caused much pain to the patient, and after all offers no advantages that he can see over any one of half-a-dozen others. Akin to this class might also be mentioned another—one, I fear, never doomed to become extinct in any age, and on whom the most labored and intelligible description of improved instruments and apparatus, from whatever source, would be lost or have but little effect, but yet, neither in numbers nor otherwise so entirely insignificant as to be passed by unnoticed. These self-styled conservatives do not as a rule take kindly to novelties, but, quite content to follow the path of writers and thinkers of the last generation, some one of whom they invariably set up to worship and accept as a guide for all time to come, could hardly be expected to become favorably impressed with any such innovation as that herein described.

Indeed, so inflexible are they in adhering to obsolete habits, and so utterly incapable of freeing themselves from the grasp of preconceived notions, that anything seeming to clash with either will not be entertained for a moment.

They neither hesitate, nor, strange as it may appear, are they ashamed to declare that every structural change to which the human uterus is prone can be diagnosticated by them with the greatest facility and satisfaction by peering through a glass tube, and for all such ails their magic wand of lunar caustic is a never-failing remedy. Now, so far as this class is concerned, but little can be hoped for from anything that I might here advance; for of what benefit would be the best microscope to one who would insist on his being able to study pathological anatomy by the aid of a Stanhope lens?

Thus, then, on the one hand, through the well-known obstinacy of manufacturers and their workmen in persisting to carry out their own notions in spite of repeated protests, and on the other from neglect, incapacity, or other causes, on the part of practitioners, the instrument has yet to be better and more generally known before its great value can be appreciated.

There is no speculum with which I am acquainted that can be used in all cases without more or less discomfort to the patient, and the one under consideration is no exception in that respect. However, though the least objectionable of all others on this ground, and the most indispensable instrument to every gynæcologist (Dr. Sims'), may be employed to draw back the perinæum with but little pain, in the majority of cases, it is unreasonable to expect that this proceeding could be carried to an equal extent by one which, though designed for a similar purpose, can accomplish the same only by making counterpressure on the arch of the pubes and base of the bladder. But it is neither proper nor at all necessary, except in operations of more than ordinary importance, and when patients are under the influence of an anæsthetic, to insist upon such a display of the parts as this instrument is capable of affording; and on this point I have been quite explicit in the following directions for its use:—

"The patient having assumed the desired position—say, on her back, with knees drawn up—and the introductory digital examination having been made, the speculum, with elevating rod drawn out, is taken in the right hand, the thumb resting on the anterior concave surface of the perineal blade, while the left index finger and thumb are used to separate the labia. It is now to be inserted downward and backward in the direction of the post-uterine cul-de-sac, and, while being thus held, the projecting handle of the elevator is to be depressed and pushed forward to the extent required to bring the uterus into a proper position in relation to the outlet, when the touch of a finger to the button-screw serves to keep everything in place.

"It will now be observed that the elevator and depressor blades describe a triangle, and the vaginal canal represents a hollow cone, whose apex is the outlet.

"The perineal blade is now to be depressed in proportion to the amount of working space required, and, of course, with due consideration for the degree of elasticity or resistance in each case, when a turn of the set-screw will serve to secure it at any desired point.

"When the object is merely to make simple applications to the cervix, a very slight depression of the blade only is needed—rarely more than half an inch. Besides, forcible and continued traction cannot be easily tolerated, and ought to be reserved exclusively for the more important operations. In the case of patients under the influence of an anæsthetic, or where the parts have been subjected to parturient expansion, no particular exactness in this respect is called for. In others, however, the utmost care should be observed, lest profitless curiosity be appeased at the expense of a patient's comfort.

"Having thus obtained a full display of the uterus and adjacent parts, the projecting lever-rod may be removed, and the patient placed in any other than the back position, previous to or at any subsequent stage of an operation, should such a procedure be indicated.

"Indeed, I have quite frequently found it desirable to change the position of patients during tedious operations without removing this speculum, and in no instance have I noticed any deviation in its relation to the intra-vaginal parts from that obtained when first adjusted.

"In proceeding to remove the instrument, the steps adopted for its introduction should be reversed, the perineal blade being first released and the elevator

* Say not more than one inch and a quarter, outside measurement.

drawn outward so that, in closing, it may clear the cervix.

"The latter purpose—closing the blades—will be best accomplished by first making slight pressure on the projecting lever-rod, as in the act of elevating the anterior wall, when the button will admit of being rolled down with a touch of the finger, and the speculum can then be withdrawn."

I trust, in thus attempting to explain the manner of using and the advantages possessed by my own speculum, I shall not be understood as ignoring the merits of other such instruments, especially those of Drs. Thomas and Nott, with which I have had considerable experience, and satisfactory too; and as for that of Dr. Sims, it is hardly supposable that any gynæcologist of the present day could pretend to do without it.

The distinctive features of the instrument above described, in addition to its being self-retaining, consists in its wider range of usefulness, and, unlike all other contrivances of the kind, in being capable of affording a complete display of the uterus, with ample room for all instrumental manipulation. There are, therefore, but few, if any, intra-vaginal operations in the whole range of uterine surgery, vesico-vaginal fistulæ perhaps alone excepted, but what may be conducted with the greater facility and completeness by its aid, and *without a speculum-assistant.*

However foreign to the subject of this paper the foregoing remarks may be deemed by some, I have very little doubt but that there are many who will hereafter, at least, candidly admit both their relevancy and importance.

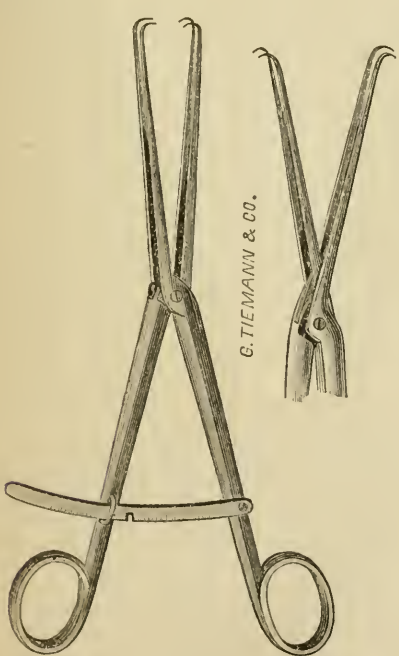


Fig. 7.

Fig. 7 is a reversible vulsellum devised for the purpose of drawing down the uterus and maintaining it in any desired position during operations; as, for example, amputation of the cervix and extirpation of cancroid growths. To accomplish this object it is to be introduced while closed within the cervical canal, and the tenaculum points reversed by a further approximation of its fenestrated ends when it may be fastened at any degree of expansion by the ratchet attachment (See Fig. 10.) I have had many opportunities of demonstrating the utility of this little instrument, and as it will also serve for a good ordinary vulsellum, I consider it an invaluable aid in most utero-vaginal operations. It is but proper to state, however, that the principle of its mechanism is no invention of mine, but originally suggested by examining a hinged tenaculum designed and used many years ago by my friend Dr. J. Marion Sims, though for entirely different purposes. The only original features about it, therefore, besides its adaptation to other uses, are in its having double instead of single projecting claws and reverse action.

Fig. 8.

Fig. 9.

Figs. 8 and 9 represent rake-toothed forceps employed for grasping such structures as are apt to break down readily, or yield to traction by any ordinary tenaculum or vulsellum. I have also found them especially serviceable in tearing away large masses of diffuse vegetating and other soft cancerous growths preparatory to cauterization of the subjacent tissues.

Having thus, as briefly as possible, described such an apparatus and the more important of the instruments which I have found needed in operations by galvano-cautery, I shall now submit a few cases from my clinical records selected solely on account of the intrinsic interest of each, and the instruction that may accrue from their perusal. The manner in which these cases are presented, and the accompanying illustrations, will, it is believed, render unnecessary any extended introductory remarks, or specific directions as to how such operations ought to be conducted.

Balbuties.—The committee (composed of MM. Tassot and Marduel) appointed to investigate Chervin's method of treating stammering, submit the subjoined conclusions: 1st. The method of Chervin is easy and very rapid; 2d. It furnishes durable results; 3d. It merits the approval and endorsement of the general council, which in bringing this method into general recognition will confer a veritable service upon indigent stammerers.

THE NECESSITY OF POST-MORTEM EXAMINATIONS.

PAPER READ AT THE COUNTY MEDICAL SOCIETY, SEPTEMBER 21, 1872.

By E. G. JANEWAY, M.D.

At the request of our President I have consented to read a paper on a subject connected with pathological anatomy, which should at the same time have a practical bearing. I have thought that I could make the subject of more interest if, instead of a set paper on some one subject, I should extract from the record of autopsies which I have superintended during a certain time, such facts and histories as would tend to show the desirability of post-mortem examinations as a means of throwing light on the dark parts of the medical history of patients. I do so the more willingly, because I hope to see the time come when they shall be of as frequent occurrence in private as in hospital practice. In order to reach this era many prejudices will have to be removed from the minds of the laity, and this change can only be secured by the medical practitioner striving to fix on the mind of his patients the necessity for examinations, not only in cases where the cause of death is doubtful, but also in such cases as may be able to explain the relationship between certain causes and effects.

After writing this preface, I found that the cases of disorders of brain furnished me with most that I would need for this occasion. It must be remembered also that these are not the only cases, but the more striking ones, with which I have had to deal; and also that this paper is nothing except deductions from my own observations, with the exception of some of the ante-mortem histories of the cases. A few of the cases have been reported to the N. Y. Pathological Society.

Most of these cases have been observed during a period extending a little over a year.

APOPLEXY.

Male; 67 years of age; a drinking man; subject to attacks of articular rheumatism; was admitted to the hospital, for rheumatic inflammation of joints of lower extremity following a contusion. The rheumatic trouble improved, but the patient's mental powers became much impaired. He had evidences of valvular lesion and hypertrophy. He sank into a listless condition, and died twelve days after admission.

The post-mortem examination showed marked atheroma of the arteries at the base of the brain. A spot of softening the size of a marble, was found in the extra-ventricular gray nucleus of the corpus striatum, and a small apoplexy in the centre of the right side of pons Varolii, cutting across the transverse fibres. At the same time there was a diminution in size of brain, and enlargement of the ventricles.

This case, without an examination, would very possibly have been considered as a case of cerebral rheumatism or of emboleum; but while the changes may have originally been caused by the rheumatic diathesis, yet they had no more to do with the present disease than in so far as a weakened heart's action increased the cerebral anæmia due to arterial obstruction so far as to cause softening.

Hypertrophy of the left ventricle, thickening of the aortic and mitral valves to a slight extent, and atrophied kidneys, were coincidences.

No. 2. This case I have already reported to the Pathological Society; still, it is of sufficient interest to bear a short repetition.

Bridget Blake was admitted to the hospital unable to give an account of herself—partly paralyzed on the right side. On the top of the skull, on this side over upper and anterior part of right parietal bone, was a depression in skull, and the scalp over this place presented a white cicatrix. Dr. S. Smith decided not to operate, as the paralysis was on the same side as the lesion, which appeared to be of old date.

The post-mortem examination showed an old depressed fracture beneath cicatrix, on the right side. But on the left side there was a recent fissure, extending from the centre of the occipital bone to foramen rotundum, through petrous portion of temporal bone. There was a large clot of blood between dura mater and bone, over the posterior part of the brain on this side, owing to a rupture of the middle meningeal artery. There were also several lacerations of the brain on this side, and the brain was flattened by pressure of clot.

The coincidences were chronic nephritis lesion.

A male, æt. 52. Admitted to the hospital in a comatose condition, in which he remained for two weeks. Was œdematous. Urine contained casts and albumen. In three weeks he was so much better as to answer questions, and in two and a half months was able to walk. At the end of three months he was seized with a series of convulsions, of which he died. His intelligence was at no time complete.

An examination showed a spot of softening (white) about two inches in diameter, and the artery leading to this plugged by a firm white embolus, situated on convexity of left posterior lobe, and several spots of softening, surrounded by yellow pigment in the right posterior lobe, just beneath cortex.

The coincidences were a rupture of middle and inner coats of aorta, just above valves. Aortic valves thickened and roughened, and appeared to have had vegetations on them. Chronic parenchymatous nephritis, with a large yellow infarction and several cicatrices, evidently resulting from infarctions of the kidneys. This case would very probably have been considered as a case of disordered intellect, resulting from kidney disease. But the post-mortem examination showed brain lesions to account for the irregular symptoms observed.

The next case I shall relate was that of a male 32 years of age. His mother had died of phthisis. He had rheumatism at 17 years of age. He came to the hospital on 13th of April, 1871. He was well till three months previous to admission, when he complained of cough, expectoration, and pain on the left side of his chest.

During the two months preceding admission he had noticed some blood in the sputa. These symptoms continued till one week before admission, when he had, in addition, a severe hæmoptysis, lasting three days, and followed by dyspnœa. On the 15th, while at supper, he fell from his chair, and on being examined was found paralyzed on the right side, the right side of face being partially affected. He was delirious—Th. 104°, pulse 120°. (Sensation and motion both affected.) A physical examination showed consolidation of the upper part of the left lung, with a hollow quality to the respiration and to a part of the râles. His condition remained about the same, with some rigidity of muscles, till the 18th, except that he became completely insensible, when death occurred.

The autopsy revealed: 1st. Meningitis; there being an exudation of sero-lymph in the meshes of the pia mater, both at the convexity, at the base and in the ventricles. 2d. A reddish-gray clot in the middle cerebral artery of the left side, blocking it and its principal branches, commencing three-quarters of an inch beyond its origin. 3d. Softening of the left

corpus striatum and of the surrounding white matter to a moderate extent. 4th. A slight hypertrophy of the heart, with stenosis of the mitral orifice, owing to shortening and thickening of the chordæ tendineæ and of the valve and adhesion of the sides of valve. The anterior leaf of valve had undergone calcareous degeneration, and on the auricular aspect this calcareous matter was laid bare, and covered by soft reddish-gray vegetations, as were the free edges of the valve. The orifice admitted only the end of the little finger. 5th. Red hepatization of the greater part of the upper lobe of the left lung. Brown induration of the posterior parts of right lung. 6th. An infarctions and cicatricial depression resulting therefrom, in the kidneys. There are several points of interest about this case; and without an examination I feel sure that its whole importance would not have been made out.

The history which he gave pointed to phthisis rather than to heart disease. There was no murmur present, as is not very unfrequent in the disease in question. But there is at times a physical sign (if you will allow me to digress a moment, which may aid me in such cases), viz., a prolongation of the first sound without real murmur, especially if associated with symptoms of obstructed circulation through the lungs. The hollow sounds were heard during the time that the man was in a partially insensible condition, and I know of no more difficult time to make a physical examination of the lungs than during coma, *i. e.* if one desires to arrive at a correct conclusion.

The meningitis undoubtedly occurred secondarily to the embolism. The earlier hæmoptysis was owing to mitral stenosis.

I have reported this case thus in full because I have examined persons with similar symptoms who had been told that they had phthisis, but who were affected with the narrowing of the mitral orifice.

A male, æt. 57, was admitted to the Hospital for carcinoma of the stomach, of which he had the usual symptoms. About three weeks later, while getting out of bed, he fell paralyzed, without the loss of consciousness. This affected the right side.

The examination showed a thrombosis of the left middle cerebral artery, beginning near its origin, without any marked disease of arterial coats, a spot of softening of small size in the posterior lobe of right side, and in its centre a small artery containing a whitish thrombus. The left posterior lobe was sclerosed. Coincidences, carcinoma of pylorus and slight localized fatty changes in heart structure.

A male, æt. 18, admitted May 5th, 1872, was struck on the evening of admission with a hand-spike, producing a severe scalp wound, and a fracture of the skull extending to upper part of spine. Nineteen days later symptoms of meningitis occurred, and at the end of six days he died.

The post-mortem examination showed a more extensive fracture than was supposed, involving the frontal bone and its orbital plate. There was also pus between the fractured bone and the dura mater, and beneath the dura mater and basilar process of the occipital bone. There were also present thrombosis of the cavernous, circular, inferior, petrosal, transverse, and lateral sinuses; and on the left side of the upper portion of the jugular vein. There was an exudation (lymph) on left side of cerebrum in pia mater, and a less amount on the right side. The deep muscular and connective tissue of neck were infiltrated with serum and small deposits of pus. The vertebral and small intervertebral veins of left side contained soft whitish thrombi, which were prolonged from vertebræ into innominate. There was also pus in the connective tissue outside the dura mater, and in the cavity of the arachnoid of cervical portion of the spine. Coincidences were the existence of empyema to a moderate extent on both sides, and the existence of lobular pneumonias—infarctions containing a small artery blocked by pieces of clot like that in veins, and pyæmic abscesses. The empyema was due to the superficial site of several of these abscesses, they being separated from this only by the pleura in a sloughy state, and some recent exudation.

This case is the type of several which I have examined: injuries to scalp or skull resulting in the inflammation of the bone or its necrosis, and the production of pus beneath dura, between it and the bone, followed by thrombosis of one or more of the cerebral sinuses, meningitis, with or without pyæmia or abscess of the brain. In fact, with the experience which I have had, I always dread injuries to the bones of the skull which deprive a portion of the bone of its periosteum, especially in persons with depraved constitutions. Twice I have witnessed phenomena nearly identical with those of the case mentioned above, following a rhinoplastic operation, in which, either as a result of the operation or of the secondary suppurative process, the periosteum over a limited portion of the frontal bone had been removed. The thrombosis in these cases occupied the longitudinal sinus. The lesson to be drawn from these facts is so evident that it seems almost superfluous to add it. It is to avoid the removal of periosteum, and the prevention or limitation, if practicable, of secondary suppuration and inflammation.

The next case which I shall relate was one of a good deal of interest to myself during his life. He was a patient at the Hospital for Epileptics and Paralytics on Blackwell's Island, admitted November, 1871.

A male, æt 42 years, store-keeper. Family history showed father to have died of paralysis at 80 years. He had indulged very frequently in sexual intercourse, drank freely, but had never had any disease. Two years previous to death had gone to bed well, to wake in the morning with complete paralysis of the right side, without loss of consciousness, and loss of power of speech. He recovered to a considerable extent; when, at the end of a year, he had a second attack in the street, losing consciousness and becoming paralyzed again on the right side. He improved considerably both in speech and power over right side for the first five months; after that time his memory and mental powers began to fail.

When I examined him, he had bright expressive eyes, a somewhat masked condition of lower part of face; saliva continually dribbling from his mouth, and his lips quivered slightly. He was able to put tongue on either side, but it trembled moderately. He had a good deal of loss of power on each side of face, and was unable to appreciate the two points of æsthesiometer in the right side of head. His speech was thick and muttering.

He had partial amnesia and ataxia, of speech and of writing; his gesture and expression remained perfect. His memory was poor, and all the special senses were slightly impaired except that of taste. His emotional nature was easily excited. The soft palate hung motionless, and its irritation failed to produce movement, and a little later he came near being choked by a piece of food.

He could only push the dynamometer to 80° on the right side, and 70° on the left. The right leg was but little weaker than the left. He walked with a shuffling gait. The sensibility of his arms was slightly impaired, as I noticed flies to crawl on them without troubling him. On the 27th of December, 1871, he suddenly sat up in bed crying, "Fire! fire! fire!" When asked what

was the matter, said: "Watch, give me some water!" and put his hand to his head. In an hour and a half he was comatose; pulse, 130; muscles of extremities rigid and twitched; pupils dilated; at the end of three hours the temperature was 103° F. The pulse and temperature fell a little, to rise again just before death, which occurred at the end of twelve hours.

The post-mortem examination showed a large quantity of blood in the subarachnoid space at base, more on the left than on the right side. There was clotted blood in the fourth ventricle; fluid blood in the third and the lateral ventricles.

The basilar artery was in a condition of chronic endarteriitis, and completely occluded by a firm white thrombus in its posterior part. The other arteries at base were moderately diseased. The posterior cerebral artery of right side had a small opening in it near its origin, around which the coats were badly diseased, and from this the blood had escaped, forcing its way into the ventricles (via the fourth). There was a cyst half an inch in diameter, containing reddish serum situated in the extra-ventricular gray nucleus of the left corpus striatum; this cyst reached to, but did not involve the white matter of corpus. The tissue around was sclerosed and pigmented (yellow) for a little distance, and the cyst had a vascular membrane. The Island of Reil of this side was represented by a thin strip of yellowish tissue (fully pigmented and sclerosed), none of the convolutions remaining. The third frontal convolution was normal, as was the rest of the brain-tissue. There was diminished size of pons and upper medulla. The other organs were normal.

This case was of interest, because with a history which pointed to an apoplexy in the vicinity of Island of Reil, there were some phenomena which pointed to some cause producing impaired nutrition, at least of pons and medulla, and I had by their study been led to diagnosticate as much. It is also of interest in showing aphasia coinciding with destruction of extra-ventricular gray nucleus of corpus striatum and of the Island of Reil. The reason for the great recovery of power was also disclosed by the limitation of the lesion to the gray matter. For a man of his size he was not as powerful with his left hand as he should have been, and this no doubt was due to the insufficient nutrition of the pons and medulla.

Of five cases which I have recorded as meningitis acute, all resulted from fracture or injury of the skull. The difficulty which may sometimes attend the discovery of a fracture, or if supposed of its position, and the liability to error as regards the exact cause for symptoms, is well shown by the following case.

A male, aged 60 years, was admitted to the hospital in a partially insensible condition and unable to speak. He could partially comprehend what was said to him. The left eye presented subconjunctival ecchymosis, without laceration of conjunctiva. He had convulsion and œdema of the lungs, and somewhat of the limbs. The patient died at the end of three days; no albumen had been found in urine.

The post-mortem examination showed fissure of the orbital plate of left side of frontal bone of small extent, and towards posterior part of the bone.

Recent exudation in pia mater of left side, especially over frontal and middle lobes. Ecchymosis of the outer part of the second and third frontal convolutions of left side.

The only other lesion was a moderate hypostatic pneumonia of lung.

A later investigation showed that the thrust of the end of a cane or umbrella was the cause of the fracture.

Two of the five cases would illustrate the position I took with reference to the liability of injuries of cranial bone, to be followed by thrombosis of sinuses, pyæmia, and meningitis. The only difference between their histories and the one I related to you is one of time and extent of injury. One lived for twenty-eight days, and the other for eighteen days after the injury. In one there was a fissure, in addition to the periostitis; in the other simply the periostitis, necrosis, thrombosis, etc., as the result of a scalp wound over the lambdoidal suture and lateral sinus.

While dealing with these diseases of the brain, I would like to draw your attention to a form of inflammation of which more mention is made in German than in English literature, and which is not so infrequent at least in its earlier manifestations. I allude to that form of inflammation denominated pachymeningitis hemorrhagica, of which also mention and delineation are given in Rindfleisch's works.

During the last year and a half I have met five cases. There was in the first case, a thin pigmented membrane on the inner surface of dura mater, consisting of fibrin; and in this, blood-pigment arranged in groups or lines. This coincided with a purulent effusion in each pleura and in the pericardium, the cause for this being suppuration in the connective tissue of the posterior mediastinum.

Another one is of considerable interest, as showing the fact that this disease may advance to a considerable extent with but slight symptoms, and these not especially indicative of cerebral disorder, and may produce death suddenly. The patient was a male of good muscular development, who complained of rheumatic pains and constipation only. One day while eating dinner he dropped dead almost instantaneously.

There was no cicatrix nor mark of injury about the body. The skull presented no lesion. On opening the dura mater of right side, about eight ounces of fluid blood escaped. The inner surface of dura mater of each side was lined by a laminated pigmented membrane of irregular thickness, and presenting here and there collections of fluid or clotted blood, between parts where the lamina of which it was composed were separated from one another. It was evidently made of connective tissue, and contained blood-vessels, some of them quite large. A few spots had undergone calcareous degeneration. The blood which escaped from the right side came partly from the so-called cavity of the arachnoid, and partly from a cavity situated between the more superficial and deeper layers of the newly formed membrane; for an opening was discovered leading from the arachnoid cavity into this sac. The edges of this opening presented a torn appearance. The pia mater of convexity was more opaque, and its vessels more varicose than usual. The brain tissues on both sides presented a compressed appearance, but much more markedly on the right. The brain tissue was anæmic, and the subarachnoid and ventricular fluid scanty. The other organs were normal. The interest of this case is enhanced by showing that instantaneous death may happen in meningeal apoplexy—a fact to me of so infrequent occurrence, that this is the only one which I have met.

I have another case to relate, where the death was due to the compression which was caused by the disease.

A female patient, thirty years of age, was admitted at Bellevue Hospital, on the 10th of June, 1872, in a comatose condition. The friends who brought her to the hospital only stated that she had been a hard drinker. She died the day after admission, never having rallied. Temperature, 103°—105°. Pulse 150.

The lesion observed in this case was the presence on

the left side and inner surface of dura mater of a blood-clot-like membrane of old date, together with some fluid blood in the meshes of this membrane, and in the cavity of the arachnoid. Some fluid blood also existed at base, and in the arachnoid cavity of opposite side. There were adhesions between the dura mater and the membrane. The brain-tissue of the left cerebral hemisphere was flattened by the compression of this tumor. The rest of the brain was normal, as were the other viscera. In this case I was unable to find any sufficient evidences of connective-tissue growth, to accept this as a case of chronic pachymeningitis hemorrhagica,—but must consider it as a hematoma. It was more than two weeks old, as the presence of well-developed blood-pigment showed.

I have seen another incident in these cases, viz.: a well-developed connective-tissue membrane on the inner surface of the dura mater, containing small collections of serum at points where there was a separation of its layers or of it from the dura mater. The lesion in this case occurred in an old man, and had nothing to do with his death, which resulted from a pyæmia secondary to ulcers of legs, and thrombosis of the femoral and profunda veins of one side.

My experience would lead me to think that we are liable to have three different lesions mixed up under a common head—viz., the presence of a true hæmatoma on the inner surface of the dura mater, the blood coming in all probability from some of the veins which enter the sinuses. I am the more strongly impelled to this view because I have seen recent hemorrhage in this site from this cause; and in one was enabled to trace it to a heavy fall on the buttocks, produced by a push several days before death, and also because I have clinically seen cases where this had in all probability occurred followed by recovery.

2d. A thin membrane made of fibrin and blood pigment, occurring in certain acute diseases.

3d. A real true pachymeningitis hemorrhagica chronica.

In passing thus rapidly over the lesions of the brain, there are some subjects on which I have not touched, because the points in relation to them have frequently been alluded to. This is true of the relationship of white cerebral softening to arterial obstruction. In this my experience bears out the view, that you find obstruction of the arteries from disease, or from a thrombus or an embolus, as its cause. In two cases only was the proof inferential. In these there were small points of softening, and coexisting vegetations of the valves of the heart. In one case softening coexisted with tubercular meningitis; but the pressure of the tubercles, and the exudation in the fissure of Sylvius, on the middle cerebral artery of the affected side, was sufficient to account for it.

In this place I should like to add a short remark about the lesions I have seen in two cases of syphilis, in which there were repeated epileptiform convulsions, producing death. Both showed inflammation of the dura mater, adhesion of it to pia and to brain over anterior lobe, and softening of brain beneath the adherent part. In neither was the lesion more than an inch and a half in diameter. I will also detail the cerebral lesion in a case of general paralysis in a young man, affected with tertiary syphilis in its severer form.

I was not able to obtain a previous history of the patient. He was a young-looking man, admitted to the hospital for epileptics and paralytics. He was demented, and suffered from paralysis of the arms and legs of both sides. He could only move dynamometer to 10° and 15°; passed his urine and fæces in bed, and would place the latter on his pillow. His body was marked in many places by the cicatrices of syphilis. His mental condition was such that the æsthesiometer was valueless. He gradually sank, dying of asthenia.

The skull-cap showed the evidences of past necrosis and inflammation. The vessels at base of the brain were markedly atheromatous (the endarteriitis). The left vertebral had a small aneurism on it. The middle cerebral of right side was greatly obstructed by thickening of its coats; that of left side almost completely obstructed by the disease of its coats, and an old thrombus calcareous in parts.

The brain was smaller than usual; ventricles enlarged. Each corpus striatum flat instead of rounded anteriorly. Each corpus striatum presented a worm-eaten appearance more markedly in gray than white matter, and more in intra than in extra ventricular nucleus. The left crust presented a little serum in interstices of nerve fibres. There was some diminution in the size of pons, and in that of right antero-lateral column of cord compared with the left.

I know that attention has been called to the subject of the inflammation of the peritoneum lining the liver; but it seems to me that the impression regarding it is that it is rather a rare disease; but on examining the records of 140 autopsies, which I had made with reference to this point, I found that 12 of this number (exclusive of cirrhosis and carcinoma) had old perihepatitis. The proportion existing is 1 in 11⅔ cases. In four cases it coincided with fatty liver—and in one each with waxy degeneration, tubercles, and lymphomatous tumors, secondary to the enlargement of the glands known as pseudo-leukæmia. The proportion certainly seems a large one. Yet I suppose that every practitioner has at times met cases of moderate pain in the region of liver or spleen (I add this latter because the evidences of perisplenitis are not very infrequent), in which he could exclude pleurisy, and yet perhaps felt a little dubious about considering it a partial peritonitis. As regards the histories of patients (such as are admitted at Bellevue) throwing light upon the exact cause and date, we do not often anticipate much success.

I might state in this place that the evidences of a partial peritonitis, other than pelvic or perihepatic or perisplenic, have been very rare. Do not misunderstand me. I am alluding to a more or less complete connective-tissue attachment of spleen and liver to diaphragm or surrounding viscera.

Whilst in adults at times the cause for death or for the disease may be veiled in doubt, this is especially the case in infants. The following case of a rather rare event will illustrate this point. A male child of three weeks' age was handed to me for examination. The umbilicus presented slight traces of inflammation. The abdomen contained about six ounces of a thin sero-purulent liquid.

The umbilical vein and the portal, with its larger branches, contained a soft discolored whitish thrombus. The small portal veins contained nothing of this nature, and the lesion of the organ was limited to a few hemorrhages. The other viscera were normal. The cause for the peritonitis, as for the periphlebitis, could only be made out in such cases by very careful examination.

Another point of interest to those practising medicine is the question of the frequency of idiopathic peritonitis.

In analyzing 188 recorded autopsies which I made, I find 11 to have presented this disease, and in none was it idiopathic.

The causes in the eleven cases mentioned were:

1st. Thrombosis of the umbilical and portal veins.

2d. Dysentery without actual perforation, but, with

numerous deep ulcers and gangrenous processes (5th week).

3d. Perforation of ulcer of the stomach.

4th. Perforation of ulcer of the intestines.

5th. Pelvic abscess opening into peritoneal cavity, caused by a spool in the vagina.

6th. Puerperal.

7th. Coincidal with an infarction, necrosis of a portion of the uterus which was being separated by suppuration.

8th. Rupture of the bladder.

9th and 10th. Tapping for ascites produced by cirrhosis.

11th. The bursting of a subperitoneal uterine abscess into peritoneal sac (following abortion, fœtus putrid). Except in a few cases of peritonitis in infants, I do not recall at the time of writing any case in which there was not some diathetic or more direct cause for the disease in those observed by myself. I have seen it associated with infarction of spleen, perinephritic abscess, carcinoma of the different abdominal viscera, abscess of the liver, suppurative submucous gastritis, etc.

The causes which would have been the most easily overlooked were, 1st, the submucous gastritis, and a case where it was secondary to the perforation of a small diverticulum in the large intestine. The diverticulum was one of a number resulting from hernias of the mucous membrane through the muscular coat.

Progress of Medical Science.

Electricity as a Means of Resuscitation.—Allan M'Lane Hamilton, M.D., New York (*Am. Practitioner*, Oct., 1872), in a paper on this subject, speaks of the following results arrived at from his own practice and experiments: 1st. That it is useless to expect good results if five minutes have elapsed since life appears extinct. 2d. That the current should be applied faithfully and steadily, one pole being placed on the ensiform cartilage, the other on the base of the skull or over the tracks of the great nerves of the neck. 3d. That the faradic and interrupted galvanic currents are the best. 4th. That the current should be applied some time after respiratory movements have become regular.

In concluding, the author says: The necessity of having a battery within reach is apparent. Every practitioner should have a small one for emergencies. They should be kept at each life-saving station on the coast, ready charged, with directions for immediate use. If this were done, he doubts if the percentage of deaths would be so great as it now is. Artificial respiration by the production of muscular movements is a very valuable means of restoration; but a force that acts directly upon the nerves supplying the muscles of respiration, is by far the surest and best.

Phtheiriasis.—W. T. Carter, M.D., Louisville, Ky. (*Am. Practitioner*, Oct., 1872), recommends the following solution for the destruction of parasites: . Corrosive sublimate, gr. xij.; alcohol ℥iv.; Oil of Bergamot, ♏vj. Mix and add water, ℥iijss. This mixture should be thoroughly applied to every part of the body infested. The first application will, in the majority of cases, cause the death of every accessible louse; but it should be continued twice daily for at least one week, in order that none may escape. In that peculiar condition of the system, described so well by Dr. McCall Anderson, in which lice multiply on the body in such numbers and with such astonishing rapidity, the iodide of potassium alone, or in combination with prussic acid, given internally, has yielded the most satisfactory results.

Cases of Hare-Lip.—David W. Yandell, M.D., Louisville, Kentucky (*Am. Practitioner*, Oct., 1872), relates, with cuts, three successful cases of hare-lip, performed after the method described in 1870 by Dr. Wm. Stokes, Jr., of Dublin, which he claimed possessed advantages over any other procedure. Dr. Yandell, of the several different operative procedures, gives the preference to that of Dr. Stokes.

Excision of Inferior Maxilla.—J. Lizars Lizars, M.D., of Toronto, Canada (*Canada Lancet*, Oct., 1872), describes a case of excision of the inferior maxilla for an enlargement of this bone, extending from about one inch below the zygoma to a line perpendicular from the angle of the mouth, in a man aged 37 years, which was performed as follows: One straight incision was made from the angle of the mouth towards the upper part of the lobe of the ear, as far as the posterior margin of the ascending ramus of the maxilla, the periosteum of the jaw, the masseter, and that part of the temporal muscle attached to the outer and lower part of the coronoid process being denuded by the handle of the scalpel and fingers. The internal maxillary artery was avoided. The proximal end of the facial and inferior dental were the only arteries requiring ligature, a few smaller branches being arrested by torsion. In this case paralysis and salivary fistula were completely prevented.

In speaking of the modes of operation, he inquires which is preferable, a simple scar across the cheek and full power of all the muscles of expression, or a scar which must show more or less a staring eye, a mouth dragged to one side and devoid of play, with probably a constant dribbling of saliva from one corner of it? He most firmly believes that every man or woman of ordinary sense would prefer the former.

Congenital Aneurismal Tumor.—J. S. Scott, M.D., Mallorytown, Ont. (*Canada Lancet*, Oct. 1872), reports the removal of a congenital aneurismal tumor from the end of the nose, of a deep purple color, an inch and a quarter in diameter and three-fourths of an inch in thickness—the patient being a male aged 30 years. Pressure was kept upon the arteries supplying the tumor until the wound was dressed. Torsion of the arteries with the pressure of adhesive straps restrained the hemorrhage. The nose was kept in shape by a covering of sheet-lead of proper shape, lined with layers of linen saturated with carbolic acid, one part to five of sweet oil.

Cantharidate of Potassa as a Vesicant.—At the late meeting of the American Pharmaceutical Association, Dr. E. R. Squibb (*Drug. Circular*, Oct., 1872), stated that having made large quantities of the preparations of cantharidate of potassa, and distributed them in various directions, he expected to hear at a future time some conclusive proof of the therapeutic value of this article. In some cases, when of recent make, it had been effectual, prompt, and cleanly in use; but recent trials of some which had been made for nearly a year failed to act promptly or satisfactorily. He expected by next year to report further on the subject. Messrs. Eberle and Ebert remarked, that ointment and plaster made by a method in which cantharidate of potassa would be present had proved ineffectual in their experience.

THE MEDICAL RECORD:

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EFFICIENCY OF OUR MEDICAL SCHOOLS.

During the last few years the question of Medical Education in its relation to our professional wants has been attracting a large share of attention. There has been a prevailing impression that our systems do not answer the requirements of the times in which we live. Little has been done, however, either towards defining faults or suggesting remedies. Recently the subject has gained new interest from important changes that have taken place in one of our sister colleges, and careful inquiry is now being made into the practical working and comparative efficiency of medical systems here and elsewhere. While much may be learned by instituting proper comparisons, we do not propose to attempt them at present, nor shall we advocate such changes as would materially alter the present status of our schools. Our aim is to expose what seems to us to be prominent defects, and to submit what we conceive to be appropriate remedies, offering such amendments to our present schemes of instruction as may serve to supplement rather than supersede them. We do not wish to hold up any one pattern for approval, but simply to call attention to certain principles which seem to be at the basis of sound medical education. As an instance, the profession will certainly agree with us that our colleges should furnish us with thorough theoretical and practical instruction in all branches of medicine practised among the profession at large; and yet we know that even in our largest cities, where cultivation and refinement rank highest, and where the demands on our profession are as exacting as in any part of the civilized world, such is not the case. We know that our colleges often fail to provide practical instruction for their pupils in departments where practising physicians have developed for themselves specialties that are the means of vastly increasing our field of usefulness, and enable us sometimes to save life. We might enumerate examples showing this, but will merely specify a single instance.

It is notorious that the discovery of the Laryngoscope has been made of valuable service to us, and we may now contend successfully with diseases that were once looked upon as intractable. Now while this is true, it is equally true that Laryngoscopy is not generally recognized, and in fact is not taught to-day in a single medical college in this city.

Again, the sphere of instruction might be extended further in the direction of other allied sciences. A well-organized school of medicine should not only include in its curriculum the practical branches which every practitioner needs in his private practice, but also the accessory ones, that bring him into relation with the public at large.

We ought to have sound practical instruction in Medical Jurisprudence for our graduates. For our students we should have courses on Embryology as well as on Histology and Pathology. The principles of Hygiene, too, with Sanitary laws, should have appropriate places in our systems.

Another point of importance is, that the larger departments in medicine should be subdivided in such a way that the entire ground may be fairly and equally covered by the instructors.

In urging the necessity of this last point, we are fully aware of the objection that the student's time is already fully occupied with the courses recommended for him to pursue. We would merely reply, that whatever innovations have been suggested might be made entirely consistent with the operation of the present system; for while every student might have the facilities offered him of getting a more thorough medical education, no new difficulties need be interposed between him and his diploma.

We do not wish, however, to defend a system that entitles the graduate, by virtue of his diploma, to practise whatever branch of medicine he may choose, when in very many of them he is ignorant of their first principles. He can hardly have any practical acquaintance with Ophthalmology or Otology, or a half-dozen other special branches of medicine. In fact, whatever he learns of these studies is not derived from the regular course of lectures at all, but from independent clinical or didactic instruction, and he is rarely questioned on them by his medical examiners.

The recent graduate, recognizing this, is compelled to begin, as it were, a new course of study before he can fit himself for taking rank among the really well-educated men of his profession, or before he can be safely trusted with the lives of the community.

Our method of instruction, too, is faulty. Take, for example, many of our really excellent lectures on anatomy. The thoroughness in description and almost absolute accuracy in each detail leave hardly anything to be desired as far as truthfulness in the representation is concerned. The practitioner or the ripe anatomist may be delighted; but is it not wholly unpalatable for the beginner? And yet students who have never

seen a human bone before, and others who have been studying Anatomy two full years, have but this single course of lectures offered them. What may be said of Anatomy may be said of Chemistry. How much more rational would it be to supply beginners with rudimentary instruction—the aim being first to insure a proper grounding, as, for instance, by dissecting-room work done under capable demonstrators, and courses in the chemical laboratory under assistants. Practical experience gained in this way might be supplemented by short didactic courses, presenting such facts in connection with the work already done, as might be readily understood and digested. So, too, Internal medicine might be taught clinically, until the student has a sufficient practical familiarity with disease, and then theoretical instruction would be doubly useful.

In a similar way the second and third year student might be furnished with material suited to the particular characters of their wants. In those departments where two full terms might well be devoted to the subject, a feasible plan would be for one instructor to conduct the longer and more complete course, while an assistant takes the shorter or more elementary one.

If the same plan were carried out through the entire course, the relative importance of each branch being impressed upon the student, and the system so contrived that he could advance by easy and natural stages from the subordinate to the higher studies, is it not probable that better practitioners would be made?

Such a system as is here suggested would require a larger corps of instructors, but it would be more efficient. Of course some reorganization would have to be made of our medical bodies. A plan similar to that instituted at some German Universities might be adopted. In the Anatomical Department, for example, besides the regular Professor, there might be a co-ordinate Professor, lecturing during the same course, and on the same subject, but to a less advanced class. In some very comprehensive department, there might be added an extraordinary Professor to the regular and co-ordinate. It would be the privilege of such an extraordinary Professor to supplement the regular course of lectures by supplying certain deficiencies in it.

Thus Military Surgery and Surgical Pathology might be advantageously attached to the chair of General Surgery; in addition, there might be a corps of Private Instructors duly commissioned to instruct in certain branches, and prepared to assume the position of extraordinary professors, should any vacancy occur or new chair be instituted.

Finally, to each chair a sufficient number of assistants might be attached, and the numbers made reasonably large, and from them the Private Instructors might be recruited. The advantages of such an organization are evident.

The college will retain about itself a large class of young men who will be stimulated to exertion by a generous rivalry. From these it will be able to select for advancement to higher positions those who have shown proofs of their ability. Many who now go abroad, to pursue special studies, will be retained at home, and we shall not be mortified by knowing that our medical men are obliged to flock to foreign universities to get an adequate education.

It may be said the system is cumbrous. But it can be shown to have worked well, and to have answered the requirements. Those who have attended the courses in the Allgemeine Krankenhaus in Vienna readily see how possible it is to furnish instruction in every branch of medicine. Multitudes of short courses are made up from time to time, and the practitioner or student can get a rapid and condensed, or long and thorough course on any subject whatever.

There are many good reasons why we do not imitate any such plan. In many of our dispensaries and public institutions, outside of our colleges, however, we might furnish good clinical instruction; and specially commissioned attachés of our colleges might be empowered to conduct regular and systematic courses.

The objection that, pecuniarily, the plan would fail, has been urged as a strong argument against it. But why should we not have as much protection in medicine as in other sciences. Has not the State of Massachusetts liberally sustained a certain Institute at one of its principal universities, and encouraged the study of the Natural Sciences, when the laborers in those fields were few; and has not private liberality often sustained chairs in our Medical Schools? It is not likely that, ten years hence, the cultivation of the advanced studies of medicine will be any more self-supporting than they are now. They never have been anything but a burden on the State, or on individuals, and yet to them we owe many of the discoveries that have thrown light on our diagnosis and treatment.

If the progress of medicine is to be sustained, it must be in a great measure through support from without. We hope this idea will receive proper encouragement, and that assistance from any quarter will be sought for and thankfully received.

We have thrown out these suggestions with the view of attracting the attention of those concerned with the future education of our medical men; their practical acquaintance with teaching will enable them to judge how far such changes are feasible in the present state of medical science in America.

Population of the Globe.—There are on the globe 1,288,000,000 souls, of which 360,000,000 are Caucasians; 522,000,000 are Mongolians; 190,000,000 are Ethiopians; 176,000,000 are Malayans; 1,000,000 are Indo-Americans. There are 8,642 languages spoken, and 1,000 religions. The yearly mortality of the globe is 42,043,000 persons. This is at the rate of 115,200 per day, 4,800 per hour, 80 per minute. Among 10,000 persons, one arrives at the age of 100; one in 500 attains the age of 80; one in a 100 to the age of 70. In 100 persons, 95 marry.

Reviews and Notices of Books.

OVARIAN TUMORS: THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT, ESPECIALLY BY OVARIOTOMY. By E. RANDOLPH PEASLEE, M.D., LL.D., Professor of Gynæcology in the Medical Department of Dartmouth College; Attending Surgeon of the New York State Woman's Hospital; Corresponding Fellow of the Obstetrical Society of Berlin; President of the New York Academy of Medicine, &c., &c. Octavo, pp. 550. New York: D. Appleton & Co. 1872.

GENERAL AND DIFFERENTIAL DIAGNOSIS OF OVARIAN TUMORS, WITH SPECIAL REFERENCE TO THE OPERATION OF OVARIOTOMY; AND OCCASIONAL PATHOLOGICAL AND THERAPEUTICAL CONSIDERATIONS. By WASHINGTON L. ATLEE, M.D. With Thirty-nine Illustrations. Philadelphia: J. B. Lippincott & Co. 1873. Octavo, pp. 482.

THE simultaneous appearance of these two works marks an epoch in the literature of gynæcology.

While reference to the bibliographical list prefixed to Dr. Peaslee's volume shows that the subject has been often written about, it will also show that it has never been, to use a technical phrase, written *up*.

It has usually been accorded a few chapters in works upon the diseases of women; discussions of various learned societies, British, Continental, and American; monographs on the histology, pathology, and operative procedures; reports of single cases and of series of cases, particularly those of Wells, Atlee, Clay, and Keith, have been accumulating the material out of which these comprehensive and systematic works are wrought.

It is now more than twenty years since each of our authors began their career as ovariotomists, and during the whole of that period each has studied assiduously every aspect of the subject in the light of the most advanced methods of science, and the widest comparison of the studies of others. Thus these complete works come to us after an incubation of more than twice the Horatian period of nine years.

The operation of ovariotomy, which was ideal in the mind of John Bell, accidental in the hands of L'Aumonier, and a mistake in the practice of Percival Post, was first deliberately and intelligently done by American surgeons, and by them alone for a period of eight years. It is fit, therefore, that America should lead in the thorough review of the subject.

In Drs. Peaslee and Atlee we have certainly the two men who are best entitled to write upon this theme. In observation of the disease, and experience as an operator, Atlee transcends any other man in this country, and is equalled by two only—anywhere.

The success of his operations also, as shown by his reports, nearly equals that of the best British surgeons; and since he has not generally conducted the after-treatment is proof of extraordinary skill in diagnosis and manipulation.

Dr. Peaslee counts a much smaller number of cases; but he brings to the work a thoroughness of study, a familiarity with the whole field of histology, physiology, pathology, and practical gynæcology not excelled perhaps by that of any man who ever performs the operation.

He has been known for more than twenty years as a lecturer in the best schools, for his clear, accurate, and methodical teaching; of which this volume is so eminent an example, that we shall endeavor to present a brief abstract of some of the more important portions.

Chapter 1st gives us the descriptive and microscopic anatomy of the ovary, parovarium, and oviducts. The fact that the ovary has but a partial peritoneal investment, and the character of the peritoneum as a lymph-sac (first established by Louis), are shown to be of much importance.

Of solid tumors of the ovary, enchondroma is said not to have been authenticated; osteoma to be not infrequent; and carcinoma to be very rare.

This last statement, understanding scirrhus as meant by carcinoma, is not questioned, we believe, by any one. It is necessary, however, to discriminate between varieties of malignant disease. When Dr. Peaslee says that in two hundred examinations he "has seen but two cases of demonstrated and two of strongly suspected cancer;" that Spencer Wells mentions but three in his first four hundred cases of ovariotomy, and Dr. Charles Clay but six in five thousand examinations, we must understand him to mean that these are all the cases of scirrhus which have been encountered. But Kiwisch, Rindfleisch, Rokitansky, Cruvelhier, Spencer Wells, and Farre assert that cancer of the ovary is *not* rare. A reviewer in the *New York Med. Journal*, Oct., 1872, states that Prof. Thomas and the writer have met with sixteen cases of demonstrated cancer of the ovary. At the stated meeting of the New York Academy of Medicine, March 16th, 1871, Prof. Thomas read a paper on Malignant Diseases of the Ovary, which is printed in this Journal, vol. 6, p. 161. Referring to this paper, we see that Dr. T. there adduces but *five* cases, and considers the first two of doubtful character; and of the fifth it may be said that, although before operation it was believed to be a classical case of malignant disease, it was afterward removed and proved to be an ordinary polycyst; whence it would appear that diagnosis, even in the hands of masters, is difficult and uncertain. Dr. Peaslee, however, makes issue with all the authorities above named, and says that encephaloid is still more rare than scirrhus, and that vesicular sarcoma of the ovary—the alveolar cancer of Cruvelhier—is not for him cancer at all. He explains the conditions described by others as cancer, as follows: In a tumor originally polycystic, some cysts undergo spontaneous rupture, and discharge their fluid contents into the cavity of the peritoneum. The epithelium of the interior of such cysts, being no longer compressed by the fluid contents, takes on a vegetative growth in villous, clavate, or leaf-like processes, in which minute pedunculated cysts are also found. These sometimes project into the cavity of the peritoneum, and have been variously called medullary cancer, encephaloid, or alveolar cancer, but are not cancer of any name, but a papilloma, which, if not benign, has at least not the character of recurrency. Dr. Peaslee has removed such masses for two patients more than twelve years ago, and there has been no form of disease since. The early ascites which has been found to be associated with such growths, represents only their cystic fluid discharged into the peritoneum at the time of rupture, and secreted by the masses in their growth. Of this order he believes almost all the cases of so-called malignant disease of the ovary, and therefore he asserts that the presumption of malignancy should seldom discourage from the undertaking of the operation. In these conclusions Dr. P. reaches a position quite different, as we understand it, from the body of pathologists, and one which has a very important practical bearing. "Non nobis tantas componere lites." Dr. Peaslee, however, admits that cancer, beginning in other organs, not seldom extends to the ovary; thus secondary cancer may invade a polycyst. p. 54. Fibroma occurs both in the corpus luteum and in the stroma, the latter being rare. Each may undergo cystic degeneration and require removal, or calcify

and become dormant, or may suffer necrosis and gangrene.

Cystic tumors are classified as: 1st. Hydrops folliculorum; 2d. cystoma ovarii — Struma, oligocysts, polycysts; and 3d. Dermoid cysts.

The first class is made to cover the condition in which the ovisacs are generally dilated, but do not attain any considerable size, and do not require removal. It is regarded as a condition of vesicular catarrh, generally coexisting with catarrh of the uterus and tubes. Of the genuine cystomata the variety named struma ovarii is described by Rindfleisch only as a cysto-colloid degeneration, occupying the entire structure of both ovaries equally. It is so rare as not to demand extended notice. In describing the remaining varieties, the author prefers the term oligocyst to monocyst, believing that the primarily single cyst is incapable of demonstration, and that probably the ultimate monocyst has become such by the disproportionate development of one division, and the absorption of the contiguous walls of other cysts. He believes the cyst-fluid, while the cysts are small, to be colloid in density; and as they increase in size, to become more fluid by endosmose, and albuminous by a form of digestive change. Generally the oligocysts contain most fluid; but the maximum quantity on record, more than 180 pounds, was found in a polycyst by Kimball, of Lowell, Mass. The walls of ovarian cysts have three layers, viz.: 1st peritoneal, which is always partial, covering only the posterior and inferior part of the cyst. From its position it may often, particularly in tumors become monocystic, and should always, if possible, be avoided in tapping. It is the most vascular layer, and, from its continuity with the entire peritoneum, any inflammatory change beginning in it is likely to spread widely; 2d. The middle layer; this is the proper tunica albuginea of the ovary hypertrophied; and 3d. The endothelium, one tier of cells in small cysts, several in larger; these secrete the fluid contents. The form of the cells is generally tesselated, sometimes ciliated. Is the tesselated variety due to compression by the fluid contents of the cyst?

The polycystic tumor seldom affects both ovaries. It is composed of some large, many smaller, and still more very small cysts. It is more common than the oligocyst, and of more rapid growth. Though, as a rule, containing less fluid, it often attains a larger mass. Sometimes the smaller cysts are condensed into a semi-solid layer, bearing somewhat the same relation to one larger as the placenta to the amniotic sac. This is the so-called alveolar cancer, considered by most authors to be a degeneration of the cyst-wall, but regarded by Dr. P. as the normal development of a variety. Dermoid cysts generally affect but one ovary, and (which is a diagnostic of prime value) grow slowly. Thus while a polycyst usually terminates life in two years after it has become large enough to be clearly felt by the patient, an oligocyst in three years, a dermoid cyst may grow for twenty years without endangering life. The outer wall of a dermoid cyst is connective tissue laden with adipose masses and infiltrated with fat cells; the inner wall is skin—corium, rete malpighianum, hair follicles, epithelium, sebaceous and sweat glands, sometimes muscular tissue and nerves.

The contents of the cysts are: sebum, epithelium, fat, uniformly; hair, teeth and bone, one or all, generally; adherent or inherent in the tissue, or free in the cavity. These structures are sometimes embryonic in their character, sometimes such as belong to the young adult. Dermoid cysts are generally congenital, develop before puberty, and are liable to adhesion and suppuration into the vagina or rectum. They may coexist with an oligo- or polycyst. An approximate estimate of the relative frequency of these forms of tumors gives polycysts, 57 per cent.; oligocysts, 38 per cent.; monocysts, 3 per cent.; dermoid cysts, 2 per cent.; carcinoma and fibroma together 1 per cent.

Ovarian tumors, other than dermoid cysts, coincide mainly with the period of menstrual life; more, however, occurring in the decade after the menopause than in that before menstruation is established. Cysts have been found in the fœtal ovaries, and have been successfully removed from patients of six and of seventy-eight years. The half decade from 25 to 30 furnishes more operations than any other. Peaslee divides the growth of ovarian cysts into four stages, viz.:—1st. From the cavity of the pelvis to a position above its brim; 2d. From this position to a level above the umbilicus; 3d. From the second position to the epigastrium; 4th. Forward and laterally to overhang the umbilicus. The first stage is ordinarily unnoticed by the patient, and therefore seldom made out by the physician; in the second the tumor is freely movable, even to the other side of the abdomen. In the third and fourth it can hardly be displaced by manipulation.

The Fallopian tube ordinarily rides upon the superior and interior border. Cysts are, in their beginning, non-pediculated (not uniformly); if there be much pelvic adhesion they can get but a short pedicle. In non-adherent oligocysts the pedicle varies from four inches in length and the same in breadth, to half of these dimensions. It is generally thicker on the borders than in the middle, the principal vessels being found on the borders. The pedicle of a polycyst is apt to be short, wide, and thick, like the palm of the hand. Parietal adhesions are common to all large cysts; visceral and pelvic are more often seen in polycysts. The relative position of the cyst to the uterus is fully discussed. Rupture, spontaneous or traumatic, sometimes occurs, more frequently in small than in large, in poly- than in oligocysts. Monocysts, thus emptied, generally refill, occasionally are cured. Cysts of the broad ligament evacuated thus or by tapping, as a rule do not refill, and the fluid of these tumors rarely excites peritonitis, but rapidly re-enters the circulation, to be thrown off by the kidneys or skin. When a polycyst is thus ruptured its colloid or sanguinolent fluid so constantly excites peritonitis of a fatal form, that observations as to refilling are wanting. Yet no recovery could be expected to follow the loss of one unit from the aggregate of sacs. The walls of ovarian cysts are liable to inflammation; if it be confined to the external, adhesions only result; if extending to the internal, suppuration and discharge externally, either through vagina, rectum, or skin.

Dermoid cysts (as might be expected) are most prone to such an issue. Gangrene may follow twisting of the pedicle, separation may take place, and the cyst remain for a time or permanently unattached in the abdominal cavity. As to their origin, oligocysts are developed from Graafian vesicles; polycysts are degenerations of the struma ovarii. Since dermoid cysts occur both in the male and the female, and are often detected before puberty, they cannot be extra-uterine conceptions; since they elect for their seat the ovary and the testis, they are probably not blighted ova included in the fœtus, but perhaps are the result of the invagination of the external blastodermic layer with the middle layer in the progress of development of the Wolffian canals whence these organs originate.

The obscurity which remains about this subject embryology will some time dissipate.

Among the probable predisposing causes to ovarian

cysts hyperæmia has some prominence, but since, from the arrangement of the veins, this is more likely to occur in the left than in the right ovary, while there is a slight excess of ovarian cysts on the right side, this cannot be a controlling cause. Hereditary predisposition probably exists. There is no sufficient proof that marriage and parturition are exciting causes, but the continuous menstrual activity of the single and the sterile woman is believed to favor the development of the disease.

As to the symptomatology: local pain or tenderness are exceptional in the early stages; constipation, dysmenorrhœa, irritable bladder, mammary irritation, and a lactescent molimen are common. As the tumor grows, pain in the back, congestion of the kidneys, irritable stomach, dyspnœa, suspended menstruation, œdema pedum and ascites result from pressure, emaciation of the chest, and a pathognomonic facial change follow.

Complications: since one ovary may be sound while the other is cystic, conception is possible and pregnancy is not uncommon. This may reach its term if the cyst be of moderate size, and ovariotomy has repeatedly been done without interrupting it. Ascites, from discharge of cyst-fluid, from peritonitis, from congestion of liver or kidneys by pressure, from organic disease or cancer, may coexist, and therefore is not pathognomonic of carcinoma.

Uterine fibroma, fibrocyst, a duplicate ovarian cyst, an hepatic, splenic or mesenteric tumor may be present with the principal tumor, or, being present singly, may simulate ovarian cystoma so closely as to render diagnosis very difficult. Liable to be mistaken for ovarian cysts also are (1st) cysts of the broad ligament; which originate as vesicles between its folds, attain a variable and often large size, have very thin translucent walls, and a light limpid fluid containing no albumen. When ruptured or tapped they almost never refill, hence ovariotomy is contra-indicated. (2d) Tubal dropsy; in which the ovarian end of the tube is dilated to a size seldom greater than that of a fœtal head. (3d) Fibro-cystic tumors of the uterus, which are sometimes cystic degenerations of subperitoneal uterine fibroids, sometimes cysts with walls of muscular and areolar tissue in continuity with the uterus. These belong mostly to middle life; are more common in America than in Europe (Emmett has seen them half as often as ovarian cysts). They are apt to have dense walls, many adhesions, opaque and sanguinolent contents, and to involve so much of the uterus as to make removal difficult or impracticable. A considerable proportion of the cases in which the operation is attempted, and not completed, au those of uterine fibrocysts, and the proportion of fatal issues when they are removed is large. Chapter V. enters upon the diagnosis. In addition to the general signs before mentioned, the local signs attainable by inspection, palpation, percussion, auscultation, change of position, rectal and vaginal touch, and the aspirateur of Diculafoy, which has been specially modified by Dr. Peaslee for this purpose, are fully detailed; also the chemical, microscopic, and spectroscopic characters of the fluids obtained. All of these are recapitulated in tabular form, for ready reference. How many chances of error beset the casual and careless ovariotomist appears from the following list of conditions in which the operation has been undertaken by error of diagnosis, viz.: ascites, normal, extra-uterine, molar, hydatiform and spurious pregnancy; cysts of the peritoneum, broad ligament, uterus, mesentery, kidney, spleen and liver; uterine fibroid, distended bladder, retained menses, obesity, physometra, hæmatometra, hæmatocele, tympanitis, movable kidney, fæcal accumulation, pelvic abscess and retroversion. Dr. Peaslee has formulated a series of nine questions which the would-be ovariotomist should propose to himself; the answers will bring out in order the points of differential diagnosis in the conditions above named. So large has been the experience of error, even to the most expert, that Wells, Clay, and others find some such mnemonic system necessary. Under each of these questions the signs are, as before, tabulated for ready reference. Chapter VII. treats of Diagnosis, applied to adhesions, length of pedicle, carcinoma, and of tapping as an aid to diagnosis. The opinion (common) that adhesions occur at the site of tapping in consequence of the operation is controverted. Tapping the peritoneal cavity for removal of ascitic fluid is a prime aid to the appreciation of underlying cystic disease, and is generally proper, rarely dangerous. Tapping a monocyst is not free from the chance of hemorrhage, peritonitis, and shock. Tapping a polycyst is highly dangerous, and should never be done unless the operator is prepared to proceed at once to gastrotomy should unfavorable symptoms arise. Exploratory incisions are subject to the same rules, but, if of limited extent, are probably safer than tapping even monocysts. Diagnosis of carcinoma is to be reached by exclusion, and by recognition of cancerous cachexia. But since it exsists in but about one-half of one per cent. in the aggregate of Wells's, Clay's, and his own cases, he thinks it should be presumed *not to* exist except where its presence can be clearly proved.

The medical treatment of ovarian tumors is discussed to the conclusion that its results are, on the whole, unimportant. The palliative surgical treatment by simple tapping is rarely to be advised, since the mortality of first tappings equals that of ovariotomy by the best operators, *e. g.*, Keith and Bradford. Rules for the operation of tapping are given, electing the sitting position for monocystic, and the recumbent for polycystic tumors. Atlee advises the recumbent in both classes, with occasional exceptions. Tapping followed by pressure, after the plan of Baker Brown, has no statistics to commend it. Simple monocysts, without complications affecting their walls or contents, *i. e.*, about 20 per cent. of ovarian tumors, may be pretty certainly and promptly cured by injection of iodine, for which sufficient directions are given. The cure, however, is apt not to be permanent. For all other cysts the iodine treatment is more fatal than ovariotomy. Tapping, followed by maintenance of a permanent opening into the cyst, has cured a certain number of cases, and is applicable to such as have been proved by exploratory incisions to be incapable of removal. Where a canula is to be worn for an indefinite time, the operation of Dr. Noeggerath, of opening into the peritoneum through Douglas' cul-de-sac, evacuating and opening the cyst, and stitching the edges of the sac to the edges of the vaginal cut, is to be preferred, and has been very successful in the hands of the inventor.

This abstract covers only the first part of Dr. Peaslee's work, with the scope of which Dr. Atlee's whole volume is parallel. He entitles it, "The Diagnosis of Ovarian Tumors." He gives us his opinions upon the causes, course, nature and pathology, and illustrates each by the report of one or more cases in point. He thus submits to us the history of 150 cases, many of which are of the most complicated and difficult nature. They evince great acumen as a diagnostician and great resources as an operator, and indicate a kind of native genius for this specialty which the profession and the community have so far recognized as to give him full employment in the practice of it. As an author he lacks that methodic analysis and that clear and orderly statement which makes Dr. Peaslee's book so satisfactory and so convenient for reference.

Certain points he has elaborated more fully than

Dr. P. For example, he asserts that the elements of a positive diagnosis between the different kinds of cysts may be attained by chemical and microscopic examination of the fluids. Thus, while ascitic fluid always contains albumen and, if there have been irritation or inflammation of the peritoneum, fibrine; the ovarian cyst *never* contains fibrine (a statement which we think requires confirmation). The cyst of the broad ligament contains a fluid which is 98 or 99 per cent. pure water, with but a trace of albumen and salts, while the fluid of the uterine fibrocyst contains an excess of fibrine—30 to 60 per cent. Again: Microscopically, the ovarian sac of both kinds contains a distinctive granular cell, manifesting under treatment by acetic acid quite different appearances from the pus cell, exudation corpuscle, lymphoid body, or blood corpuscle. "No matter what other cells may be present or absent, the cell which is almost invariably found in ovarian cyst fluid is the granular cell."

It is notable also that Dr. Atlee is by no means so averse to tapping polycysts as Dr. Peaslee and the European authorities.

The second part of Dr. Peaslee's book treats of Ovariotomy, its history, statistics, indications, prognosis operative methods, after-treatment, and post-mortem appearances. The limits of this paper do not allow us to continue the abstract of this portion of the volume. It is sufficient to say that it corresponds in fulness and exactness to the first part. Every operator receives his meed of notice, and every method is fully canvassed. The description of the steps of the operation and the after-treatment is fully detailed. The proceeding of washing out the abdomen repeatedly every day, which was first introduced by the author, has become common, and has been found to be the most valuable prophylactic and curative against septicæmia. The unique and brilliant operation of Prof. Thomas for the removal of a cyst by vaginal incision is given in his own words. Dr. Peaslee believes this operation has very limited applicability, in which opinion we think some other experts do not altogether coincide. Dr. Atlee has nothing to correspond with this second part of Dr. P.'s work, for which reason his volume will be less studied by those who, from choice or necessity, propose to operate. Atlee's work follows after Peaslee's as a record of cases follows after an essay upon a disease. They are, therefore, companion volumes, and whoever desires to be accomplished in Gynæcology will "read, mark, and inwardly digest" both.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 17, 1872.

Dr. E. R. Peaslee, President, in the Chair.

The President acknowledged the following donations to the library: October number of the Edinburgh Medical Journal; Dr. Yandell's Address before the American Association.

PREVENTION OF DEATH FROM DROWNING.

Dr. B. Howard read a short paper on "The Preventible Deaths from Drowning within the Metropolitan District of New York." Cases were related where death (?) from drowning had occurred quite a time previously to their being seen, and resuscitation was the result. In answer to the query whether life departed had ever been recalled, he stated that experience could not gainsay it. In 1768, in Holland, an edict was passed for rescuing drowned persons. The Royal Humane Society of London was instituted in 1764. In 1856 a new era dawned when artificial respiration was resorted to by Marshall Hall. In 1862 the London Royal Humane Society saved 173 persons; 100 were restored, notwithstanding 27 intended suicide.

The speaker next referred to the means of resuscitation in vogue in the Metropolitan District of New York, and alluded to its extensive water-front of 167 miles, etc. During the six months ending October 31, 1867, two hundred and six submarine accidents occurred. Dr. Chas. P. Russel's statistics showed that during the past seventeen years, from 1855 to 1871, the total number of asphyxiated persons and deaths of that nature amounted to 4,861; 285 persons died from suffocation annually; during the past twenty years 6,000 deaths occurred from these causes.

In the way of preventing deaths and restoring drowning persons not much has been done in the city of New York. In 1868, the Metropolitan Board of Health passed resolutions in favor of ladders, etc. Dr Howard's report on this subject may be found in the report of that same year. According to Dr. E. H. Janes, City Sanitary Inspector, no active means are now being made by the present Board, further than was done by the old Board.

In concluding, the author remarked that if the want of apparatus is great, the need of instruction for resuscitation is greater. The mortality from suffocation and drowning will increase as population increases. In the New York reports no cases of restoration are mentioned; London statistics exhibit 91 per cent. of those restored.

On motion of Dr. Agnew, seconded by Dr. Chamberlain, the paper was referred to the following Committee, appointed by the President, for further action: Drs. Agnew, Peaslee, Barker, Howard, and Ball.

RHINOPLASTY.

The indulgence of the Academy was granted to Dr. Buck for the purpose of exhibiting an unique case of rhinoplasty. The patient, clerk by occupation, aged 35, when first seen, exhibited a nose partly bitten off by an opponent. The parts had been denuded of skin, with somewhat ragged edges. The alæ at the junction of the apex were involved, leaving about two-thirds of the alæ undisturbed. The operation consisted in paring the edges of the alæ on both sides, and dissecting the intervening skin into the eyebrows. A layer of fresh lint, saturated with collodion, was applied over the raw surface for ten days at a time. At the end of six days the artificial scab fell off. Two casts were shown, one taken when first under observation, the other after the parts had healed. The patient, with his respectable nose, indulged the members with an examination. Dr. Buck stated that care should be taken to guard against incisions through the pericranium, otherwise sloughing would ensue.

ON ACNE.

Dr. Lucius D. Bulkley, by invitation, then read a lengthy paper on "Acne" (which will be published elsewhere), based on the analysis of 162 cases of the disease in its different forms as occurring in the private practice of the late Dr. H. D. Bulkley and his own—of which the following is a brief summary.

Acne presents itself for treatment next in frequency to eczema, psoriasis appearing after acne. This holds true, however, more in private practice than in that observed among the poor in Dispensaries; thus Mr. Wilson's private practice gives 167 per thousand miscellaneous skin cases; the London Skin Hospital, under Mr. Startin, 76 in 1,016; St. John's Hospital, 58 in a thousand. Dr. Bulkley records 126 in somewhat over 900 cases; or at the rate of 189 per thousand—or nearly one-fifth of the whole; Mr. Wilson's proportion being about one-sixth, while the hospital practice of Mr. Startin and Mr. Milton give one-thirteenth and one-seventeenth respectively; eczema forming on the average about one-third of all cases of cutaneous disease.

Before entering directly on the subject the matter of classification of skin diseases was touched on, and a tribute paid to the valuable results established by Willan and Bateman, which have stood so well the test of time, and whose orders and views in a large measure are accepted avowedly or tacitly more widely than any others. The Doctor differs from their arrangement somewhat, and very decidedly from Neumann, and follows Balmanno Squire rather in forming a classification for clinical purposes, based on the eight orders of Willan, with the addition of three "natural orders," namely, syphilides, diseases of the glands and appendages of the skin, and parasitic diseases, which may be considered as rescued from Willan's arrangement, and which present clinical features entitling them to an independent position.

These six varieties of acne the author thinks well established, and sufficient to cover all the ground, although he reports thirty-four species found in twenty-eight writers, Bazin alone making sixteen.

The anatomy of his subject was very fully presented, but space forbids giving it in detail. The writer does not consider the plugging up of the ducts and the irritation of the sebum as the sole cause of acne, for many acne papules and pustules have no central core of sebum; and again the disease may result from internal causes, as iodide of potash; also the masses of indurated and rosaceous acne are independent of this exciting cause. In *acne molluscum*, the anatomical distinction between the contagious and non-contagious varieties appeared to be based on an external opening in the former, through which the contents issued when pressed, communicating the disease, while the non-contagious variety represent closed sacs, which give little annoyance except by their size. The anatomy in both is simple, an investing membrane and pultaceous contents, the sac coming finally to involve and distend all the acini of the gland; a number of instances of each were cited from journals, and elsewhere.

But little is seen in *acne rosacea* on the cadaver save the dilated vessels and some thickening around them. *Acne hypertrophica* comes under this head, where the thickening and fibrous deposit, together with the enlarged vessels, produces a true hypertrophic disfigurement.

In the matter of the causation of acne, Dr. Bulkley differs strongly from the local pathology of the German, and expresses himself very forcibly in favor of the internal origin of acne in a large majority of instances, showing that 115, or nearly three-quarters, of the entire number of cases were recorded as connected with digestive and sexual disorders, while in eighteen the notes are imperfect, and in but seven cases was the affection noted as in any way dependent on external causes. The female sex seems to predispose to acne; 114, or nearly three-quarters of the whole number, were females. Of the 115 associated with internal disorders, 68 had constipation, 27 dyspepsia, 29 (of the 114 females) uterine or menstrual derangement, and 6 derangement of the urinary function. Others were addicted to wine, led sedentary habits, were in scrofulous persons, etc. Many combined several of these manifestations of disease. These histories, the doctor remarked, were not made with a view to such an analysis, but were compiled in daily practice, to assist in treatment, and some of them were made 25 or 30 years ago, in the practice of the late Dr. H. D. Bulkley. The conviction comes that acne is therefore closely connected with these affections, especially as we see them keeping pace in their improvement and retrogradation.

The writer accepts in a measure Bazin's arthritic diathesis as being a clinical fact, that certain morbid phenomena are found associated in some individuals or families, among which are an acid dyspepsia, rheumatism and gout, bronchitis and accompanying asthma, and certain cutaneous affections, as many cases of acne, also urticaria, erythema, and some forms of eczema, lichen, and psoriasis.

As to acne being a disease dependent upon the changes of puberty, the writer's statistics seem to disprove the fact asserted by so many, inasmuch as of the 69 cases of acne simplex but 19 were noted as under 20 years of age, 6 being 40 or over. The female average was 25⅔ years, male 22½, whereas we would anticipate to find the disease earlier in females than males, to agree with their earlier development. J. L. Milton found but 14 cases of acne in nearly 2,000 of spermatorrhœa; therefore he discredits the latter as having any effect in producing the disease under consideration.

Acne rosacea gave an average age of 39⅙ years in males; the youngest affected was aged 22, oldest 60 In females the average was 33⅙; youngest 19, oldest 50 years of age.

Occupation, as stooping, working before a fire, as blacksmiths, etc., was mentioned as a cause of acne; also cosmetics, exposure to climate, solar heat, and medicinal substances, as iodine, bromine, and tar locally.

Diagnosis.—Not difficult, as a rule, but the disease might be confounded with the papulo-pustular syphilide. The different varieties of sebaceous acne resemble closely at times, and may be mistaken for, erythematous lupus, but they are quite different diseases, the latter being allied to true lupus in its nature.

Unfavorable as is the prognosis usually given of acne, Dr. Bulkley expressed very decided views as to its curability when due regard was paid to internal treatment, including diet and regimen, with a judicious use of local remedies; and he supports his views, founded on practice, by Wilson's assertions, together with the fact, that those writers who recognize more an internal cause, and treat it as Wilson, Startin, Fox, Bazin, and others, speak more hopefully of the cure of acne, than do Hebra, Neumann, Hardy, and their school, who tend more to local pathology, and consequently to local treatment.

Some cases may be hereditary, and others associated with habitual intemperance; in these the prognosis must necessarily be bad.

Treatment.—This must of course be based upon the views entertained as to the cause and nature of the disease; and Dr. Bulkley, with his strong belief in the internal causes of acne, devoted most of the time to a relation of the constitutional measures most successful with him, together with dietary regulations and directions as to exercise, mentioning but briefly the local means which he had used with the best results as adjuvants.

The first element considered was constipation, which

was found noted as present in 68 of the 162 cases, while many more were supposed at times to be thus affected to a greater or less degree. This, he insisted, must be overcome, in order to cure the acne, but not by the ordinary use of purgatives, the abuse of which has brought discredit upon the employment of the internal treatment of acne. Attention must be paid to diet, exercise, and regularity in answering the calls of nature; and when medicine is required, the writer had had most success with minute doses of aloes combined with iron given repeatedly after meals, gradually diminishing their number as the required effect is produced. He also prescribed a well-known pill of 2½ gr. each of Blue mass and comp. ext. colocynth and ¼ gr. ipecac—two such alternate nights for a while, followed by Kissingen water.

The second of these was shown to be divided into sebaceous, perspiratory, capillary, and ungual affections, and the writer uses the term acne generically to indicate all the diseases of sebaceous glands, which he thus arranges:

1st order—Due to a faulty secretion or excretion of the sebaceous glands.	1. Acne sebacea,	oleosa,	
		cerea,	
		cornea,	
		exsiccata.	
	2. Acne punctata,	comedo,	
		milium.	
	3. Acne mollusc um.	contagiosum.	Sessile.
		non-contagiosum,	pendulum.
2d order—Due to inflammation of the sebaceous glands, together with the surrounding tissue.	4. Acne simplex.		
	5. Acne indurata.		
	6. Acne rosacea.		

Many, it was said, have dis-associated some of these forms; thus, Acne sebacea is treated of as seborrhœa or stearrhœa, and acne punctata hereincludes the comedo and milium of other writers, which names it is well enough to retain, but only as explicatives. Again, acne rosacea is placed among an entirely different class of affections by Wilson, who classes it with eczema, impetigo, scabies, and others, while the nomenclature of Neumann associates acne rosacea with ordinary acne, sycosis, and impetigo, simply on the ground of their being pustular diseases. The reason for the grouping given is, that acne in all its varieties is so plainly a disease of the sebaceous glands, and the different forms are so commonly associated or succeed each other.

Acne sebacea embraced four varieties—1. *oleosa*, when the quantity secreted is too great, but of proper consistency, and the part affected has a greasy or unctuous look and feel; 2. *cerea*, when the consistency is altered, while the quantity may be natural or likewise disordered: here scales are formed, sometimes thick and hard, generally thin—a good deal of dandruff is of this nature; 3. *cornea*, this is rare—the scales attain greater size and are very hard, forming the disease termed by Wilson ichthyosis sebacea; 4. *exsiccata*, or dry skin, keroderma or xerosis, where the sebaceous secretion is disordered in being scanty or altogether absent. Of acne sebacea the writer reported twelve cases as occurring in the 162 analyzed; of these it was noted as existing alone in seven, with acne punctata in one, with simplex in four, and rosacea in one.

Acne punctata was defined as a failure of excretion, in which the alteration of secretion may be primary, possibly secondary; its two varieties are the comedo and milium. The former, the little black specks seen on most faces, popularly called worms or grubs, are but the gland ducts distended with dried sebum, the orifices remaining open; while milium, sometimes called strophulus albidus and acne albida, results from an occlusion of the opening of the sebaceous duct whereby minute follicular tumors are formed, whose contents consist mostly of the cellular element with a stroma running through them. Dr. Bulkley would restrict the term acne punctata to these two forms, using the term acne simplex to designate the same when there is inflammatory action around them. This punctate acne is so commonly associated with other forms, and is in itself so trifling, that it seldom occurs alone in the case-book, none being so entered among the cases here analyzed. It was found alluded to, however, in 22 instances, once in connection with acne sebacea, 17 times with a. simplex, twice with a. indurata, and twice with acne simplex and indurata together.

The third species was *acne molluscum*, commonly known as molluscum alone, the acne varioliformis or molluscoides of French writers, and generally conceded to include two forms, the non-contagious and contagious, for, although inoculations with the contents have failed, many cases occur in groups in such a manner as to very strongly show its communicability.

The second order of acne embraced by far the largest part of the cases coming for treatment. Acne simplex is here made to represent the ordinary cases in which there are few or many distinct papules sprinkled over the face, neck, or body, from whatever cause they may result. This represented the acne vulgaris of many writers, made by Hebra to include acne punctata, pustulosa, hordeolaris, and indurata; the same as with Wilson, being subdivided into acne coniformis, pustulosa, and tuberculata, and the acne disseminata of Neumann, including a. vulgaris, frontalis, cachecticorum, and artificialis. These papules and pustules were noted as occurring in 98 of the 162 cases, in 52 alone, 17 in conjunction with a. punctata, 4 with a. sebacea, 16 with a. indurata, 7 with a. rosacea, and 2 with a. punct. and indurata.

Acne indurata the writer will not accept as merely a step in the process of development of acne simplex; to him it is not an inflammatory state of that variety, but the term is more properly applied to those cases where there are large nodules, embracing many glands, and which are not attended with the pain of acute inflammatory action, but where the softening takes place slowly, involving a considerable extent of tissue, discharging always an appreciable, sometimes a large amount of unhealthy pus, and which leave cicatrices, occasionally very disfiguring. Here he introduced a patient presenting a remarkable case of this variety in which the seams and pittings resembled those after small-pox, and whose face was yet covered with multitudes of tuberculous elevations, some of them already softened, together with many and very large comedones. The speaker then went on to say that 33 cases were reported as having such tuberculous elevations, nine with them alone, and the remainder associated with other forms.

Acne rosacea, he continued, was most frequent after the simplex variety; of this there were 52 cases, 40 with this form alone.

Sycosis, which has been called by some acne mentagra, could not be included here, as it is merely a dermal inflammation in the bearded chin, modified by depth and size of the follicles, and may be a result from eczema or herpes tonsurans, while it may likewise be a true acne of the parts, when it will fall under its proper head.

(To be continued.)

Deaths from Chloroform.—*The Boston Medical and Surgical Journal* presents ten more cases of death from chloroform, recorded by contemporaries during the present year, which, with twenty-nine cases previously reported, makes thirty-nine cases compiled by that journal.

Correspondence.

THE ANTIQUITY OF EXCISIONS.

To the Editor of the Medical Record.

Sir:—In the *American Journal of Medical Sciences* for October, 1872, there appears quite a clever review of Markoe's "Treatise on Diseases of the Bones," in which the reviewer, on pp. 453–4, corrects Dr. Markoe's historical allusion to excision, and says: "White's operation, such as it was, was preceded by Filkin's excision of the knee in 1762." From this statement it might be inferred that a knowledge of the operations of excision performed prior to 1762 is not generally extant. That excision was known and practised a long time before the above-mentioned date the following facts will go to prove:—Mr. Le Cat, Professor of Anatomy and Surgery, communicated an account of his operation to the academy at Rouen, in the year 1751. The case occurred in the person of Charles Lehee, a child of three years old, of the village of Pitre, etc., from whom was extracted an entire tibia, exostosed and carious in its whole extent, between the two articulations, which had remained sound: the great deficiency of bone-substance was entirely supplied again by nature, and the patient acquired a new tibia, much firmer than that which he had lost. The same operator relates "an account of the extraction of three inches and ten lines of the bone of the upper arm, which was followed by a regeneration of the bony matter." This performance, Mr. Le Cat tells us, he determined upon after considering the case of Charles Lehee, which instance had sufficiently convinced him that bones have the power to regenerate. The subject was a soldier, Francis Romain, aged 41, who it appears received at the battle of Rocou, in 1755, a gunshot wound such as modern surgeons would consider to be a typical case for excision of the shoulder-joint. The operation was done in 1760, and on October 12, Romain was discharged from hospital, very thankful for the recovery of his health and the perfect cure he received. A detailed account of these cases, "with a description of a machine made use of to keep the upper and lower pieces of the bone at their proper distances, during the time that the regeneration was taking place," can be found in the *Philosophical Transactions*, vol. lvi., 1766, p. 270, *et seq.*

Tracing the history of excisions a little further back, we read:*—"Ansam inventionis hujus præbuisse videtur Thomas, chirurgus anglicus, qui Pezenate Languedociæ, anno 1740, puellæ quatuor annorum, humeri necrosi laborantis, curam in se susceperat; caput columque humeri, necrosi destructa, e vulnere, quod abscessus articuli aperiendi causa fecerat, prominebant, quæ reponere quidem studuit, quæ vero posthac necessitate coactus amovit; quod vix speravit factum; puella uno mense præterlapso sanata ita est, ut ætatis anno decimo quinto omnibus famulæ officiis fungi valeret."

Long before White's operation, Diemerbroeck (1637) mentions a case of fracture where a part of the tibia was removed by the saw, and hardness restored so far that the bone absolutely recovered its original firmness. But even he was not the first to perform this operation, for in his book he mentions a similar operation, which was done a little after the siege of Ostend was instituted in 1601. He writes: "Molitor quidam e mola sua decidens, tibiam cum fibula in medio confregit, tanta cum violentia, ut superior pars carnem perforans, in ipsam duram terram vi adigeretur, atque non solum carne, verum etiam periosteo privaretur; senex quidam chirurgus, in arte sua experimentissimus, qui olim obsidioni Ostendæ famosæ interfuerat, suasit istius ossis, periosteo circiter ad duorum digitorum latitudinem penitus denudati, ablationem mox consentientibus cæteris chirurgus: dictum factum, et secunda religatione os illud subtili serra amputatum fuit: tunc dictus chirurgus crus ad pristinam longitudinem rursus extendit, et sic in ligneatheca æqualiter deposuit, vulnus quotidie sine cruris commotione inspiciendo: atque sic ex utroque ossis fine paullatim succrescens callus ita coibat, ac sensim in osseam duritiem firmabatur, ita ut crus pristinam longitudinem retineret, et ubi os ablatum esset, postea videri vix posset."*

For the curious it may be interesting to go back still further. The following is a translation from a Polish work on Operative Surgery:† "Excision was already known in ancient times, and we have undoubted proof of this in the writings of Hippocrates, Celsus, Avicena, Galen, and Paulus Æginitus. In Hippocrates' work, '*De Articulis*,' we find: '*At resectiones ossium perfectæ circa articulos et in pede et in manu, et in tibia ad malleolos, et in cubitu ad juncturam manus, plerisquæ quibus resecantur innoxiæ sunt, si non statim animi deliquium evertat, aut quarto die, febris continua accedat.*'

"When, in after times, every science fell into decline, this operation became lost; and if, in subsequent centuries, excision was ever employed, the operators have never known how to describe it with accuracy. Duhamel's investigations‡ into the destination of the periosteum in vivification and growth of the bone, which led him to the opinion that 'the periosteum forms the bone,' gave the first impulse in the revival of the operation, already justified by the physiological and anatomical knowledge of that time."

Before concluding, it may be remarked that the reviewer, in criticising "the peculiarities of Dr. Markoe's style," selects for that purpose a sentence which he misquotes. In the copy of Dr. M.'s work before me, at page 157, is found the word "*presents*," in the sentence referred to, and not "*pursues*." I. C. R.

1735 F street, Washington, Nov. 11, 1872.

* Ullrich (G. E.)—*De Ossium Resectione.* Lipsiæ: 1857.

* Bercht (Alexander)—*De Resectione Articulorum.* Berolini: 1849.
† Le Brun, *Chirurgia Operacyjna.* Warszawa: 1868, p. 442.
‡ 1739.

CYSTOTOMY FOR CHRONIC CYSTITIS.

To the Editor of the Medical Record.

Sir:—In your issue of September 1st, I notice an article from Dr. Battey, of Rome, Ga., claiming priority over Dr. Briddon, in the operation of perineal cystotomy, for the relief or cure of chronic cystitis in the male. These gentlemen may be interested in learning that the operation has been performed in this city for several years, with very satisfactory results. Professor E. Powell, of Rush Medical College, had several times resorted to this operation prior to the year 1869.

I have frequently seen him perform it, in hospital and private practice, and have yet to learn of a case in which it did not afford relief.

During the winter of 1869 I assisted him in this operation upon a private patient, who had for many months been suffering with severe cystitis. The more urgent symptoms were immediately relieved, the wound was allowed to heal without the use of the canula, and eventually the patient made a complete recovery.

Dr. Powell's note-book was burned with his library last fall, so that I am unable to obtain a detailed history of his cases.

He has advocated this mode of treatment for chronic cystitis, in his teachings since 1866; and considers it a standard operation, which need not be left as a *dernier-ressort*, but which may be practised with much benefit early, before the vesical walls become much changed by inflammation.

E. F. Ingals, M.D.

34 Thrasop st., Chicago, Ill., October 19, 1872.

ARMY NEWS.

Official List of the Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 5, 1872, to November 18, 1872, inclusive.

McKee, J. C., Surgeon, granted leave of absence for fifteen days. S. O. No. 220, Dept. of the East, Nov. 13th, 1872.

Bill, J. H., Surgeon, relieved from duty in Dept. of the Columbia, to proceed to New York City, and, on his arrival there, report by letter to the Surgeon-General. S. O. No. 231, War Dept., A. G. O., Nov. 7th, 1872.

Goddard, C. E., Surgeon, assigned to duty as Post Surgeon, at Fort Hamilton, N. Y. Harbor. S. O. No. 219, Dept. of the East, Nov. 9th, 1872.

Forwood, W. H., Asst. Surgeon, assigned to duty as Post Surgeon at Fort Richardson, Texas. S. O. No. 200, Dept. of Texas, Nov. 7th, 1872.

DeGraw, C. S., Asst. Surgeon, assigned to duty as Post Surgeon at Fort Davis, Texas. S. O. No. 195, Dept. of Texas, Oct. 31st, 1872.

Hubbard, Van Buren, Asst. Surgeon, relieved from operation of S. O. No. 19, c. s., War Dept., and to report by letter to the Comd'g officer Dept. of the Gulf for assignment to duty. S. O. No. 281, War Dept., A. G. O., Nov. 7th, 1872.

Kinsman, J. H., Asst. Surgeon, assigned to duty as Post Surgeon at Fort Ellis, Mon. Ty. S. O. No. 216, Dept. of Dakota, Oct. 31st, 1872.

Vickery, R. S., Asst. Surgeon, to accompany detachment of 1st Art'y, leaving New York City on the 9th inst., to Barrancas, Fla., and, on arrival there, to report to the commanding officer, Dept. of the Gulf, for assignment.

Telegraphic order of 5th inst, from A. G. O., confirmed by S. O. No. 281, War Dept., A. G. O., Nov. 7th, 1872.

Munn, C. E., Asst. Surgeon, granted leave of absence for 30 days, with permission to apply for an extension of 30 days. S. O. No. 276, War Dept., A. G. O., Nov. 2d, 1872.

Medical Items and News.

Death from Bichloride of Methylene.—At the Middlesex Hospital, London, Oct. 9th, a death occurred from the use of bichloride of methylene. The patient, male, aged 48, with a deep abscess in the buttock, and about to undergo an operation, inhaled about two drachms of the anæsthetic and died in one minute. Sylvester's method of artificial respiration and galvanism were restored to, but without avail.

Anæsthetics.—According to John Morgan, M.D., F.R.C.S.I., Surgeon to Mercer's Hospital, Dublin (*British Med. Journal*, Oct., 1872), the ratio of deaths following the employment of anæsthetics is as follows:

Agent employed.	Deaths.	Inhalations.
Ether,	1 to	92,815, or 1 in 23,204
Chloroform,	53 to	152,260, or 1 in 2,873
Mixture of Chloroform and Ether,	2 to	11,176, or 1 in 5,588
Bichloride of Methylene,	2 to	10,000, or 1 in 5,000

A New Scotch Lunatic Asylum.—Glasgow, Barony Parish, Scotland, is to have a new lunatic asylum, costing about $300,000. The grounds comprise 176 acres, of which some twelve acres will be covered with buildings.

Dundee Royal Infirmary.—From the Annual Report of this institution we learn that 1,138 fever patients were admitted in the year 1871, composed of small-pox and typhus and relapsing fevers.

The Trephine.—The reviewer of Professor Markoe's work on "Diseases of the Bones" (*Am. Jour. Med. Science*, Oct., '72), thus remarks: The use of the trephine in cases of abscess in bone was, we believe, first formally taught, as the proper mode of treatment, by David, in his essay which received the prize of the French Royal Academy of Surgery, in 1764. David was followed by Bromfield, in 1773; by Hey, of Leeds, in 1786; by Nathan Smith, in a case of diffused suppuration, in 1798; and by Simons, of South Carolina, in 1820. Brodie's first operation was not performed until 1828.

St. Thomas' Hospital, London.—The Saint Thomas' Hospital Reports, for 1871, give the following statistics concerning the obstetrical department: Between December 6, 1869, and December 6, 1870, 1,250 children were born in the obstetrical wards. Of these, 1,206 were born alive; 44 were still-born, or 3.5 per cent. Eighteen women gave birth to twins. Of the 1,232 cases attended, 150 were first labors; 169, second; 170, third; 176, fourth; 149, fifth; 110, sixth; 102, seventh; 67, eighth; 58, ninth; 32, tenth; 14, eleventh; 13, twelfth; 10, thirteenth; 2, fourteenth; and 1 was a seventeenth labor. The presentations of the 1,250 children were as follows: vertex, 1,212; breech, 23; footling, 5; arm, 2; face, 5; brow, 3.

Effects of Tobacco.—The *Medical Press and Circular*, in the course of an article on this subject, says M. Bertillon found that 102 of the pupils attending the Polytechnic School of Paris smoked tobacco, while 58 did not. Arranging the two categories in the order of merit, according to the results of examinations, he found that, in every grade, non-smokers held the higher rank, and that the smokers deteriorated from the time they entered until they left the school. Facts like these induced the Minister of Public Instruction to issue to the directors of colleges and schools throughout the empire a circular, forbidding tobacco to students on the ground that it checked their physical and intellectual development. The editor says: "Among ourselves the habit is getting too common. . . . . But how is the habit to be stopped, *when meerschaum pipes are even given for prizes in Sunday-schools?*"

Medical Instruction for Women in Russia.—Next January a special course of instruction for midwives will be commenced at the Imperial Academy of Medicine and Surgery at St. Petersburg. Applicants must not be under twenty, and, if still under the authority of parents, must present the written consent of the latter. They will be submitted to a preliminary examination,

especially with reference to their knowledge of mathematics, within the limits of instruction in the gymnasia for young girls, their intellectual development, and their knowledge of Russian. The object of the course is to prepare trained midwives to give necessary medical assistance to parturient women, and to treat diseases of women and children. The course will last four years, and the fees will be fifty roubles per annum.

Adulterations of Whiskey and Beer.—The *Financial Reformer*, writing on this subject, remarks that Dr. Hodges, of Belfast, has publicly stated that a bottle of whiskey, described as a fair sample of the liquor sold in low-class public-houses, was heavily adulterated with naphtha, Cayenne pepper, and vitriol; that another sample consisted almost entirely of naphtha, with a slight coloring tinge of genuine whiskey; and that another charming compound was composed of Cayenne pepper, vitriol, spirits of wine, and blue-stone, which could be produced at the rate of a penny per gallon. A writer in the *Scientific Review*, some three or four years ago, enumerated among the multifarious ingredients for the adulteration of ale, beer, and porter, cream of tartar, alum, green vitriol, copper, lead, pyrotic acid, cocculus indicus, grains of paradise, coloring matters of various descriptions, quassia, and other cheaper and more hurtful bitters, ledum palustre, myrica gale, and datura stramonium; besides liquorice, molasses, coriander, capsicum, caraway-seeds, salt, horse-beans, etc., etc. Hence, though the honest products of barley, hops, and the vine may have much to answer for, they are debited with a vast amount of evil which is really occasioned by noxious, and in some instances murderous, substitutes for them. One of the multifarious recipes for fraudulent concoctions, given in a book published for the guidance and assistance of publicans and vintners, winds up with: "A pinch or two of *oxalic acid*" does something or other, we forget exactly what, but it is something in the way of improvement!—*Medical Press and Circular.*

A Few Words on the Other Side of the Question — Those who know something of the general tenor of the almost endless amount of "correspondences," "reports of societies," and "original articles" which have, for the last couple of years, appeared in the British journals in reference to sanitary science, may perhaps appreciate the following by "Senex;"

"Until these inconsistencies, of which I have adduced but a type, be reconciled, I believe these hygienic dogmas require still to be established (that water containing organic matter is prejudicial to health, and that typhoid fever is caused by inhaling sewage gas), and in fact that, divested of polysyllabic technicalities and chemical symbols, are but bosh—a term not found in Johnson, but well understood to mean things we don't understand, though we pretend to.

Though I thus doubt the received notions, I would not be understood to mean that offensive gases, dirt, and impure water are not injurious, quite the reverse; I believe no more fertile source of bad health exists, except bad food and dissipation. I merely object to ideas inconsistent with our ordinary experience being received as scientific truisms. Sewage effluvia may be a very important factor in making up a sufficient cause of typhoid, but there is obviously something more—a great deal more. Water with organic matter may be associated with disease-producing qualities; but it is no explanation of the morbid result to say there is organic matter in the water, when people are known to have drunk from the very same source for ages with impunity. I merely object to wholesale faith in the ability of insufficient, unproven causes to produce important results, without the why and wherefore being explained to us why disease from the alleged cause should be the exception and not the rule."

The Use of Ether in England.—B. Joy Jeffries, M.D. (*Boston Med. and Surg. Jour.*, Oct. 3, '72), in a lengthy paper on "Re-Introduction of Ether in England," states that he had an opportunity, during his late visit to London, of exhibiting to the English surgeons the American or Boston method of administering ether, with which he believes the English and Continental surgeons are generally unacquainted. During his stay in London he administered it, with good results, at London, King's College, St. George's, Gray's, and Royal London Hospitals, while Messrs. Hutchinson, Soelberg Wells, Critchell, Bowman, Brudenell, Carter, and Bader, performed capital operations. Since his return, many persons, both in and out of the profession, have mentioned the subject to him, but with such a tone of incredulity as to induce him to present the facts, and describe what he saw and heard. He says: "To the majority of people it is incomprehensible that ether should not be used and understood in England and on the Continent as it is here, in New England especially. Their doubts would be fully satisfied, had they seen, as I did, the astonishment, and, I will add, acknowledged satisfaction, of the medical gentlemen who witnessed my administration of this anæsthetic in London."

Boldo.—A new remedy, distilled from the leaves of a tree, of the genus *Monimiaceæ*, imported from Chili, has been lately introduced into Europe. So far, it has been given empirically for affections of the liver. Probably, like cundurango, its life will be short, as it is strongly advocated by quacks and others of that ilk.

Fatal Case of Narcotism.—Dr. Campbell (*Boston Med. and Surg. Jour.*, Oct. 3, '72), at a late meeting of the Norfolk District Medical Society, reported a fatal case of narcotism in a child fourteen days old, probably induced by a dose of chloral and morphia administered to the mother.

Czermak.—The eminent psychologist, Prof. Czermak, of Graz, Director of the Styrian Insane Asylum, died recently.

Social Evil Hospital, St. Louis, Mo.—The site for this new hospital, designed for the reception of fallen women, has been selected by the Board of Health of St. Louis. The inauguration of this institution is the climax of a system that some two years ago received the sanction of the authorities there, and which, since then, has been carried on with all the vigor and inflexibility of other established laws—the registration of abandoned women, their examination by a staff of physicians, and their payment of weekly and monthly dues. The regular weekly payment of a dollar and a half by each courtesan, and fourteen dollars monthly from each keeper of a house of ill-fame, has resulted in the accumulation of many thousand dollars, which is now being appropriated, in accordance with the requirements of the law, for the treatment of these women.

New York City Asylum for the Insane, Ward's Island.—At a special meeting of the Board of Commissioners of Charities and Corrections, held November 10, 1872, the Resident Physician, Dr. M. G. Echeverria, was summarily dismissed. The Dr. was about to resign from the position, but he was determined not to do so until a fair investigation of his conduct was made by the proper authorities, and the facts about the alleged mismanagement laid before the public.

Dr. George Cochran, Health-officer of Brooklyn, died November 19, 1872, aged 40.

Medical Association of Northern New York.—This Association held its annual meeting at the Ferguson House, in Malone, October 8, 1872, the President, T. De Forris, M.D., of Plattsburgh, in the chair. The following named officers were elected for the ensuing year:—*President*, C. C. Bates, M.D., of Potsdam; *Vice President*, Calvin Skinner, M.D., of Malone; *Secretary*, Sidney P. Bates, M.D., of Malone; *Treasurer*, A. C. Butler, M.D., of Plattsburgh. Place of next meeting, Malone. Subjects for discussion at the meeting of 1873:—"Public Hygiene," A. S. Wolff, M.D., of Dannemora, to open the discussion. "Puerpural Convulsions," H. A. Boland, M. D., of Lawrenceville, to open discussion. *Essayists*, Drs. S. L. Parmelee, of Gouverneur, William Gillis, of Fort Covington, and A. C Butler, of Plattsburgh.

St. Luke's Hospital, N. Y.—The anniversary of this Hospital was celebrated on Sunday, November 10, 1872. About 1000 patients were treated during the year just ended. Wm. B. Astor, Esq., has given $50,000 to the institution.

New York Society for the Relief of the Ruptured and Crippled.—The report for 1872 gives the subjoined particulars: Since its organization in 1864 until the end of the year 1870, 11,764 patients were treated at the old hospital in Second Avenue. Since that date 6,027 patients were treated in the new hospital, corner Forty-second Street and Lexington Avenue, of whom 388 were in-patients. The Institution is capable of accommodating 200 to 250 children, with private apartments for 20 pay-patients. The assets amount to about $100,000. At the present time there are 81 children in the hospital. Resident Physician and Surgeon, James M. Knight, M.D. Assistant, H. E. Handerson, M.D.

Medical Department of the University of New York.—This successful medical college, founded in 1838, has graduated 3,058 medical men, or, on an average, about 99 yearly. For several years before our late war the graduating classes ranged from 121 to 146 in number. The recent "Catalogue of the Graduates and Officers" gives the subjoined particulars: The *first Faculty of Medicine*, elected in 1838, was composed of Drs. Martyn Paine, John W. Draper, Charles A. Lee, Alfred C. Post, Gunning S. Bedford, Augustus S. Doane. *Associate Professors:* Drs. Caleb S. Ticknor, John C. Beales, John Watson, J. A. McVicar, Jas. A. Washington. Of the original founders of the institution, Drs. Post, Draper, and Paine still are connected with it—the former actively lecturing. Professors Wm. Darling and John Basteed, of New York, and John R. Dickson, of Kingston, Canada, are of the first (1842) graduating class. Of the class of 1872, six are connected with the House Staff of Charity Hospital.

The work of collecting facts concerning graduates will be continued under the supervision of the Secretary of the Alumni Association. The information will be published in subsequent editions of the catalogue. (Particulars of only 850 of the graduates have been offered.) Graduates whose addresses and professional histories are not recorded will please send: 1st. Their names in full, including the first, middle, and last. 2d. Their post-office address. 3d. The names and dates of literary degrees. 4th. Places of honor and trust held since graduation, *i. e.*, held by virtue of professional attainments; not places political or social—giving dates of appointments and terms of service. 5th. Information of deceased graduates, including, if possible, their names in full, places of honor and trust held, etc., and the time, place, and cause of death. Communications may be addressed to the Secretary of the Alumni Association, Chas. Inslee Pardee, M.D., No. 72 West 35th street, New York.

The Woman's Hospital.—The seventeenth anniversary of the New York State Woman's Hospital was held in one of the wards of the institution, on the corner of Fourth avenue and Forty-ninth street. This institution has been in existence since 1852, during which time 740 cases have been treated, of which 637 have been cured, seventy-three relieved and thirty died. The Treasurer's report was then read by Mr. L. H. Bliss, which showed that the receipts amounted to $25,779.20, and the expenses to $27,004.09, leaving a deficit to be made up of $1,225.49. Dr. T. G. Thomas then read the medical report, which spoke favorably of the results of the past year, but advocated very strongly the removal of the hospital up town, as the noise of the passing trains was very annoying to the patients. The medical address was made by Dr. E. R. Peaslee. He claimed in order to have this hospital maintain its pre-eminence it would be necessary to raise $1,000,000, half of which should be used at once and half to be had on call. Since 1870 over two thousand patients had been treated, 800 of which by the outdoor department. During the past year the hospital has treated sixty-two patients.

The Thermometer.—Dr. F. M. Hamlin, of Union Springs, N. Y., recently read a practical paper before the Central New York Medical Association, on the "Thermometer in Diseases," which is published in the September number of the *Buffalo Medical and Surgical Journal*.

Hay-Asthma.—The vicinity of the White Mountains is a resort for those who are yearly disposed to "hay-fever." Rev. Henry Ward Beecher, Sir Edward Thornton, with others, it is said, are entirely relieved when there from this disagreeable complaint.

Williams College, Massachusetts.—Dr. Ira Remsen, formerly of New York, and late instructor at the University of Tübinger Germany, has been appointed to the chair of Physics and Chemistry at Williams College, Mass.

Lynch.—Dr. John S. Lynch, formerly of Alabama, has been elected Professor of Anatomy in the Baltimore College of Physicians and Surgeons.

New Publications.

Books Received.

The Microscope and Microscopical Technology; a Text-book for Physicians and Students, etc. By Dr. Heinrich Frey, Prof. Med., Zurich, Switzerland. Translated from the German and Edited by Geo. R. Cutter, M.D. New York: W. Wood & Co. 1872.

A System of Oral Surgery, being a consideration of the Diseases and Surgery of the Mouth, Jaws, and associate Parts. By James E. Garretson, M.D., DD.S., Oral Surgeon to the Med. Dept. of University of Pa. Philadelphia: J. B. Lippincott. 1873.

Outlines of Surgery and Surgical Pathology, etc. By F. Le Gros Clark, F. R. S. 2d Ed. Philadelphia: Lindsay & Blakiston. 1872.

The Pathology, Diagnosis, and Treatment of Diseases of Women, including Diagnosis of Pregnancy. By Graily Hewit, M.D., F.R.C.P. 2d Amer. Ed. Philadelphia: Lindsay & Blakiston. 1872.

Prevention and Cure of Disease; a Practical Treatise on the Nursing and Home Treatment of the Sick. By Geo. H. Napheys, A.M., M.D. Springfield, N. J: Holland & Co. 1872.

Transactions of the American Otological Society, Fifth Annual Meeting.

Original Communications.

CLINICAL NOTES

ON THE

ELECTRIC CAUTERY IN UTERINE SURGERY.

By J. BYRNE, M.D.,

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In the preceding remarks it has been my aim to deal only with such questions as seemed to have a practical bearing on the subject of galvano-cautery; so that, for the sake of avoiding tedious details, many points of great interest and importance have been barely noticed, or passed over entirely.

With the same object in view, the clinical part of this paper will consist of a tabular record of operations, their subdivision into groups or classes, and such comments thereon as may serve to elucidate the more striking features of each, together with a few illustrative cases.

The whole number of cautery operations thus far occurring within my own observation has been seventy-three as follows:—

19 cases of epithelioma, including cauliflower cancer.
11 " encephaloid, or medullary cancer.
13 " catarrhal, inflammatory, and ulcerative affections of the cervical canal of uterus.
5 " amputation of cervix (non-malignant).
4 " fibrous and fibro-cellular polypi.
4 " sessile fibroid tumors.
2 " deep ulceration of os and cervix.
1 " intra-uterine vegetation (non-malignant).
2 " vascular tumors of urethra.
4 " granular urethritis.
3 " hemorrhoids.
1 " perineo-vaginal fistula.
1 " lipoma of scalp.
1 " lipoma of cheek.
1 " lipoma of ear.

70

Of the thirty cases of malignant disease,
17 were of the uterus alone.
7 " " uterus and vagina.
3 " " perinæum and vagina.
1 " " left labium.
1 " " clitoris.
1 " " breast.

Among the nineteen cases of epithelioma,
7 were indurated or ulcerated only, and
12 were of the vegetating or cauliflower character. Of the latter,
7 were of the cervix uteri alone.
3 were of the perinæum and vagina.
1 was restricted to the left labium.
1 was restricted to the clitoris.

The following table shows the date of operation, the parts involved, and the condition of patients UP TO DATE, in seven cases of epithelioma in its ulcerating stage of development.

TABLE I.

	Date of operation.	Parts removed.	Progress.
1	May 10, 1870	Posterior lip.	Patient left hospital well, and though lost sight of since, believed to be cured.
2	July 7, 1871	Entire cervix.	No return of disease, health entirely restored.
3	July 26, 1871	Anterior lip.	No return of disease; died some months after fm. other causes.
4	Jan. 25, 1872	Entire cervix.	No return of disease; general health entirely restored.
5	Feb. 28, 1872	Entire cervix.	No return of disease.
6	June 5, 1872	Conical piece from centre of cervix.	Disease reappeared.
7	Nov. 13, 1872	Entire cervix.	Operation at this time believed to be radically curative.

There are two out of the above seven operations that demand especial notice—Nos. 6 and 7—the same patient being the subject of both, as also of a previous operation undertaken for the removal of a cauliflower outgrowth (see table II. No. 3). At the time this lady came under my notice, my experience in galvano-cautery was comparatively limited, nor did I fully realize, though not without some misgivings on the subject, the great importance of removing tissues as far beyond those apparently implicated as can be safely done.

In every such instance, therefore, since met with, the removal of the outgrowth has been but the first part of each operation, except where, by traction being made on the tumor at a certain stage, a deeply cup-shaped stump could be insured. Indeed, from what I have since observed, I feel justified in believing that had this rule been observed in the above case, the result would have been entirely different.

As to the failure of a second operation in the case of this lady, my explanation is simply this: the anæsthetic used on the latter occasion was nitrous oxide gas, and owing to certain alarming symptoms manifesting themselves a few minutes after I had commenced to operate, I felt impelled, in my anxiety for the patient's safety, to stop much short of so complete and satisfactory an operation as I might otherwise have effected. However, as the patient's general health is yet good, the best results may reasonably be hoped for from the more thorough measures adopted within the last few weeks.

The following case (table I. No. 2) bears so forcibly on the importance of effectually removing all the diseased structures at least, and at the same time so well illustrates my method of operating, that its introduction here may add to the interest of what has been said.

CASE I.

CARCINOMA OF UTERUS,

involving both intra and supra-vaginal portions of the cervix.

About the 1st of July, 1871, I was requested by Dr. George K. Smith to see Mrs. ——, aged 47, the mother of three children, the youngest of whom being 10 years old. Previous to three years ago menstruation had always been regular; but since then, and up to within the last fifteen months, symptoms such as usually usher in the climacteric period were observed. The catamenia now, and for over a year past, had lost all the character of periodicity, and metrorrhagic hemorrhages had reduced her to a perfectly helpless condition. Her nocturnal pains were almost intolerable; emaciation had taken place to a very remarkable degree, and her anxious, care-worn, and cachectic expression might alone have sufficed to indicate the nature of her malady.

By a digital examination, the cervix uteri was found much enlarged and irregularly indurated. The cervical

canal was open to the extent of admitting an inch of the index finger, while the surrounding tissues, as far as could be reached within the neck, were unyielding, extremely tender to touch, and bled freely on the slightest provocation. Depth of uterus three inches.

Owing to the absence of any circular line of depression at the utero-vaginal point of convergence, it was found impossible to apply the cautery loop in such a manner as to include more than a small portion only of the diseased structures.

This difficulty, though not encountered before, had, nevertheless, been fully considered as one of the many contingencies likely to arise, and therefore, being anticipated, was provided for.

The patient having been anæsthetized, no trouble was found in bringing the diseased part into view, and by the aid of my speculum, ample space was afforded for any manipulation required.

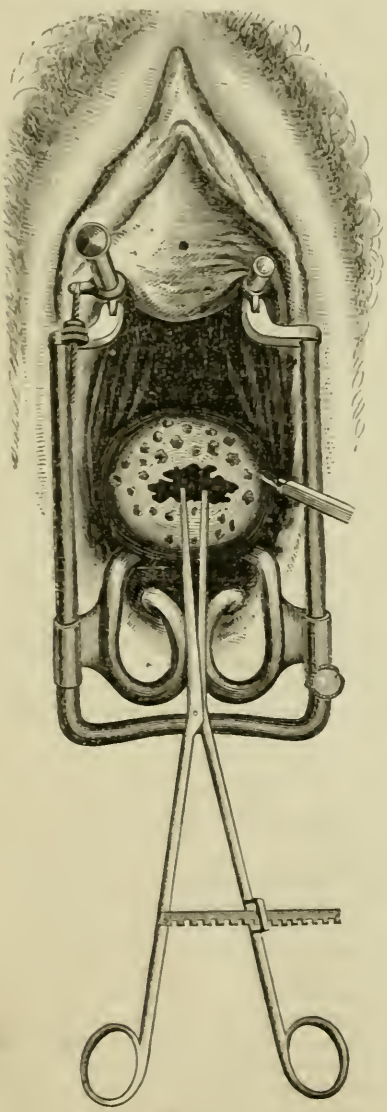

FIG. 10.

The gentlemen present at this operation were Drs. G. K. Smith, Skene, Dwyer, and Bedell. The cervix was seized by a vulsellum held in the left hand, while with the cautery-knife* the cervix was slowly severed and removed without loss of blood. The same instrument, only more curved by being bent, was now applied to the deeper tissues of the cervix, which, while drawn down by a tenaculum, were cautiously sliced off piece by piece, laterally as well as upward, to the utmost extent deemed safe.

When the parts were thus quite scooped out, a deep bell-shaped cavity was left, from the bottom of which to the fundus uteri measured little over half an inch. No hemorrhage occurred during the whole operation.†

The recovery of this patient was no less rapid than remarkable, and if we except a very trivial secondary hemorrhage, and some degree of irritation arising from accidental scorching of the vaginal wall, no single inflammatory, febrile, or other complication turned up to mar her progress. She has become strong and robust, and up to a very late period has even menstruated regularly, the flow being of course but very slight, yet unaccompanied with pain or distress of any kind. She is under constant observation, and calls at stated intervals, according to my request, for the purpose of being carefully examined. There is but little of a uterus to be felt, and the vaginal canal ends in a kind of cul-de-sac, at the bottom of which a still narrower passage may be detected, in depth about three-quarters of an inch.

The above report of this case was written in the early part of last June, and she is still in the enjoyment of perfect health, having safely passed the climacteric period. That the successful issue in the foregoing case is due to the thorough manner in which the diseased tissues were cored out, I think there can be no doubt. It is also suggestive of the probable causes of failures and disappointments so often met with by some of our best gynæcologists, as referred to in the first part of this paper.

The following case clearly exemplifies the folly of trusting to half-way measures, and also where indurated and ulcerating conditions, however apparently limited in extent, resist judicious and active topical measures, how necessary it is to remove the whole cervix up to, and, if needed to insure success, to scoop out even beyond, the os internum.

CASE II.

CARCINOMA OF CERVIX.

Mrs. H——, aged 30; has had one child and two miscarriages; applied for advice to the out-door department of St. Mary's Hospital in June, 1871. Menstruation had been regular up to six months before this date, but since then she has suffered from menorrhagia, sometimes excessive, but always prolonged, with shooting pains in the sacral and inguinal regions, and throbbing sensations in the vagina. She appeared much debilitated, and a physical examination of chest showed tubercular deposits in both lungs.

On making a digital examination per vaginam, the cervix uteri was found much tumefied, tender on pressure, and irregularly indurated.

The cervical canal in its inferior half, though open, admitted the sound with difficulty and its most careful introduction was followed by much bleeding. Depth of uterus 3 inches. By the topical application of strong solution of iodine and the use of quinine, iron, and cod-liver oil, the size of the cervix and its hardness seemed to lessen, while her general condition improved in a proportionate degree for a time, so that treatment was abandoned. October 4th she applied again on account of a return of her original symptoms,

* The knife should be got into position before heating.

† A microscopical examination showed cancer cells and free nuclei in abundance.

and on a careful examination her condition was found to be very similar to that first observed, and the uterine cervix much more enlarged and indurated. It was now decided to try the effect of actual cautery to cervical canal as far up as the os internum, and also around the os tincæ, hoping by such active means to create healthy action and perhaps relieve congestion by producing a drain. At the end of a month the local condition seemed much better, and for two menstrual periods following this last treatment she had no menorrhagia, and her general health appeared to improve.

This improvement, however, was but temporary, for she once more, on the 25th of January, reported herself as feeling much worse than ever, and an examination fully confirmed the truth of her suspicions. She stated that she had been flowing for two weeks continuously, as was very evident from her anæmic look, and on examination the diseased parts presented a much more tumefied and inflamed appearance than on any previous occasion.

It was now decided to remove the whole cervix by galvano-cautery. The condition of her lungs rendering the administration of an anæsthetic of doubtful propriety, and being also desirous to ascertain the amount and extent of pain attending such operations, she was induced to forego etherization. The operation may be described as follows: The uterus having been brought into view and steadied by means of my speculum, the cervix was seized with a vulsellum, and the cautery-knife, before being heated, applied posteriorly, the blade directed transversely, and its edge looking upward and forward. The battery being now immersed, the knife was carried completely around the circumference of the cervix close to its vaginal insertion. In this manner a deep and somewhat oblique groove was made which served as a bed for the loop. The latter was now made to embrace the cervix still held in the grasp of the vulsellum, the battery again immersed, and some traction being made during the passage of the heated wire through the tissues, the operation was completed. When the cervix was removed, what remained of the uterus was deeply concave, and its cavity measured less than 1½ inch. There was no hemorrhage during or subsequent to the operation, and, what is of some consequence to know, she declared that the pain experienced during this operation was no greater than she suffered repeatedly before, when any active topical application was made.

May 16th. Menstruation has appeared twice since the operation, lasting each time four days, and without the slightest inconvenience or tendency to hemorrhage. She has gained flesh, is free from pain, and expresses herself entirely well. By a careful vaginal examination, no trace whatever of disease can be recognized either by sight or touch.

A microscopical examination of the part extirpated gave abundant evidence of carcinomatous disease.

As to the eleven cases of epithelioma characterized by exuberant outgrowths from a comparatively narrow base, the same tabular arrangement observed in the first class may be conveniently adopted.

The first case in this table possesses so many features of great interest, that any remarks beyond those embodied in the following history seem uncalled for.

CASE III.

EPITHELIOMA OF CERVIX UTERI.

Mrs. A. ———, æt. 48, multipara, has always enjoyed the best of health up to within a few weeks of my being called to see her, which was in July, 1869. She complained of great back-ache and bearing down sensations, and noticed some discharge of mucus occasionally mixed with blood. Menstruation regular and normal in character and has always been so. By digital examination the cervix was found much tumefied, more particularly the posterior lip, and painful to touch. On inspection by speculum, there was found a slightly elevated and velvety-looking surface stripped of epithelium and extending over at least one-half of the posterior lip. Anterior half of cervix, though somewhat swollen, yet soft to the touch and paler. The local treatment consisted in warm vaginal douching and the application of iodo-glycerine to the diseased parts once and sometimes twice a week. A marked improvement was noticeable after a few weeks of this treatment, and hopes were entertained that it might be permanent. November 9th, I was requested to see her again, when she stated that her old pains and other disagreeable symptoms had lately returned, but in a much more severe degree. Besides, there was this peculiarity, she said, about her sufferings, that she was seized about 4 or 5 o'clock every morning with severe lumbar and hypogastric pain, which lasted up to 9 or 10, but after this latter hour she felt relieved and continued comfortable until the same hour of the succeeding morning. A speculum examination now revealed a similar condition of the uterus to that first observed, when the same active topical measures were once more resorted to, but on this occasion with no improvement whatever.

TABLE II.

VEGETATING EPITHELIOMA.

	Date of operation.	Parts removed.	Progress to date.
1	Jan. 4th, 1870.	Posterior lip.	No return of disease.
2	Dec. 4th, 1870.	Left labium vagina.	No return; died from other causes sixteen months after operation.
3	June 18th, 1871.	A part of both lips which the tumor seemed to involve equally.	Reappeared in ulcerating form.
4	Sept. 13th, 1871.		Died from causes not attributable to operation.
5	Nov., 1871.	Labium and part of perinæum.	Little gained by operation.
6	Feb. 11th, 1872.	Tumor and cervix.	Had recovered perfectly and no return of disease at last report.
7	April 26th, 1872.	Entire cervix.	No return of disease.
8	March 6th, 1872.	Labioris.	Believed to be cured.
9	May 4th, 1872.	Entire cervix.	Well at last report.
10	July 20th, 1872.	Entire cervix and cauterized, suspicious, warty-looking excrescences on vagina.	Doing well at last report.
11	Nov. 20th, 1872.	Left labium and nates.	Greatly relieved.
12	Dec. 4th, 1872.	Left labium and nates.	Greatly relieved.

The disease, for some time suspected, was diagnosed as epithelioma, and for the following among other reasons: 1st. The hereditary predisposition existed in a marked degree, and of which important fact I had had some personal knowledge; and 2d. The disease had resisted treatment, constitutional as well as local, well calculated to improve if not to cure a less serious ailment.*

About this time (December, 1869), Dr. Noeggerath exhibited at a meeting of the New York Obstetrical Society a specimen of epithelioma removed from the cervix uteri by galvano-cautery, and its resemblance of what I had observed in my own patient induced me to request a consultation with Dr. N.

This having been readily assented to, and my diagnosis concurred in, it was decided to remove the diseased part by galvano-cautery, and the operation was performed on the 4th of January, 1870.

* This latter fact is, in my opinion, of the utmost importance in all such cases, and presents strong presumptive evidence of malignancy.

This was accomplished by the platina loop, the shape of the tumor rendering this a work of no great difficulty, and the part excised embraced nearly the entire vaginal portion of the posterior lip.

A little glycerine and tannin was brushed over the cauterized surface, the bowels kept quiet by opiate suppositories for a few days, and in less than two weeks the patient, with no other local treatment save tepid vaginal baths, was up and about. On the 1st of February, 27 days after the operation, the healing process was found to be so nearly complete that nothing farther seemed needed, and being entirely relieved of all pain she rapidly recovered strength.

A careful speculum examination, however, was made every few weeks for some time, with a view of detecting any reappearance of the disease, but nothing of the sort being noticed, these precautionary measures were abandoned after a few months. About a year ago this lady requested me to see her again, and stated that she had lately suffered so much from pelvic pains, referable particularly to the bladder and pelvic region, that she feared there might be some return of her former difficulty.

A careful examination failed to detect anything more than a slight abrasion on the posterior aspect of the os tincæ, and a certain degree of firmness of the part from which the disease had been removed. This, however, was attributed to mere congestion of the part, and active topical applications quickly restored the parts to their natural condition.

Other measures calculated to relieve slight cystitis, which undoubtedly caused much of the pain and distress complained of, were prescribed, and the patient rapidly recovered. Six months ago (May 20, 1872), I was requested to see her, when she informed me that she began to feel a little anxious on account of some slight mucous discharge and more or less tenesmus. It was deemed best to examine into the state of the uterus: this was found to be in a condition precisely similar to that of twelve months previously, and after two applications of iodo-glycerine to cervical canal, the improvement at last examination was so great that no further treatment was called for.

Menstruation has not yet appeared regularly, and this last attack was doubtless due to a scanty flow at a previous period. It should have been mentioned, that the outgrowth when removed was submitted to a careful microscopical examination, and all the evidences of true epithelioma were present. It is now nearly three years since the operation.*

CASE IV.

The second case in the preceding class was one of extensive epithelioma, involving the whole of the left labium vaginæ in an old lady aged 70. The entire part was removed by cautery, and in less than one month from the date of operation the surface healed and seemed to be covered over by perfectly smooth and healthy material. She continued to enjoy good health, for one of her years, during the succeeding twelve months, when symptoms indicating cancerous disease of mesentery and other internal parts rapidly became developed, and from which she succumbed 16 months after the operation. It is worthy of remark, however, that the surface from which the diseased mass had been excised remained perfectly healthy up to the time of her death, nor were any of the pelvic organs concerned in the final work of destruction.

CASE V.

The case having already been referred to (No. 5, Table I.), calls for but little further notice. This lady, whose age is thirty-one, a widow, consulted Dr. J. Marion Sims, in consequence of having been informed by her physician that she had cancer of the womb, which she did not believe, at the same time giving as a reason for her opinion the fact of her having had little or no pain or uncomfortable feeling in that region; and, moreover, that after full inquiry she felt satisfied there was no hereditary predisposition to such a disease. Menstruation had always been regular, and she had had no hemorrhage, but during the menstrual intervals she had of late noticed some watery discharge of an offensive odor.

Dr. Sims recognized a large cauliflower mass springing from the whole circumference of the cervix, and spreading out so as to occupy a great part of the vaginal cavity. He advised its removal, and requested me to operate by galvano-cautery, which I did on the 18th of June, 1871. In this operation the neck of the tumor was embraced by the wire loop and its removal thus effected; but in addition to the mistake of leaving too much behind, as before stated, there was also another error committed, which on account of the clinical lesson it teaches ought not to be overlooked. The instrument shown in Fig. 2 was then new, and used on that occasion for the first time, so that I was not accustomed to this improved means of contracting the loop, and miscalculated as to the screw motion. The consequence was that the tissues were too rapidly severed, and though there was no loss of blood whatever at the time, an alarming secondary hemorrhage took place about thirty-six hours after the operation, requiring the use of tampon.

No. 4 is a case where I assisted Dr. James L. Brown in operating, and which has been reported elsewhere. This was a promising case, and its fatal termination had nothing whatever to do with the merits of the operation; death being caused mainly by imprudence on the part of the patient, and other circumstances beyond the control of her medical adviser.

The patient, in whose case parts of the right labium and perinæum were removed on three occasions (Nos. 5, 11 and 12), is the wife of a physician in this city. The cautery was resorted to in this instance merely for the purpose of excising portions of a large suppurating and offensive mass, hoping thereby to contribute in some measure to her comfort, or rather to modify her suffering.*

The extent to which the rectum, vagina, and neighboring parts were involved, was such as to render the case an utterly hopeless one, and consequently nothing beyond palliative effects could be looked for from any operative proceedings.

CASE VI.

On the 11th of last February I was requested by Dr. J. Marion Sims to operate by galvano-cautery in the case of a lady whose history is as folows: Mrs. ———, aged fifty, of healthy ancestry on her father's side, but several members of her mother's family have died from pulmonary affections, and one, an aunt, from cancer of breast. Menstruation commenced at 14 and has always been regular up to February, 1871. Has had seven children, and a premature confinement in 1856, from which she recovered speedily. From February, 1871, until August the catamenia were absent, but in the latter month she had a profuse metrorrhagia lasting for several days, and returning more copiously three weeks later.

On examination per vaginam, a tumor about the

* A few weeks ago (Nov. 26) the uterus was carefully examined, but no evidence of a return of the disease could be detected.

* Dr. Geo. M. Beard has also operated previously in this case by electrolysis, but with little effect.

size of a hen's egg was found springing from the cervix and projecting into the vagina; canal of uterus of normal depth; body not hypertrophied. This tumor was removed by écraseur on September 23, 1871, and presented under the microscope the characteristic appearances of epithelial cancer. The patient seemed to improve in some respects until about the first of January, 1872, when hemorrhage returned and large quantities of blood were lost throughout that whole month.

Dr. Sims saw her on the 10th of February and discovered a large cauliflower tumor springing from the cervix and completely filling up the upper half of the vagina. The following day, February 11th, was appointed for its removal, and Dr. S. having accidentally sprained his ankle while stepping out of his carriage, requested me to see her and operate for him. The patient was found to be in a very exhausted condition from loss of blood, and emaciated to so remarkable a degree that grave doubts were entertained as to the propriety of operating or risking the administration of any anæsthetic.

In such a state of things, however, some interference seemed urgently demanded, and ether having been administered, the operation was proceeded with in the following manner:

The platina loop was with considerable difficulty made to embrace *the upper circumference of the cervix*, and when *moderately tightened* the battery was immersed; little or no contraction of the loop being effected for a few seconds, so that the superficial tissues of the part to be cut might be thoroughly cauterized. When the wire was supposed to have entered the tissues a quarter of an inch or thereabouts, firm and steady traction was made on the tumor by means of a vulsellum,* and its connections *very slowly* severed by a further tightening of the loop. By this manœuvre the surface from which the tumor had been removed presented a deeply concave appearance and there was no hemorrhage whatever. The uterine cavity measured about one inch from the bottom of the wound. No topical application was made.

As this patient resided some miles from the city, I had no opportunity of observing her subsequent progress; but one of the gentlemen who assisted at the operation† informed me some days after, when he called to see her, that her condition was very precarious. Towards the end of May, having occasion to visit her neighborhood, I called to see her, and found her going about and able to superintend her household affairs.

The following reply to a note of inquiry has been since received from her attending physician, Dr. Fürgang, of East New York:—

"Dear Doctor: In accordance with your request I have given Mrs. ——— a very careful examination. Her pelvic organs, or what is left of them, seem to be in a perfectly healthy condition. There is nothing to the touch or sight that would lead to the suspicion of a return of her disease. The part from which the tumor was taken is a little puckered, but soft and covered with healthy-looking mucous membrane, and there is no tenderness on pressure there or in any of the adjoining parts. Her appetite is excellent, she sleeps well, and is rapidly gaining in strength and flesh." This case calls for no further comment.

CASE VII.

This was what appeared to me to be epithelial cancer of the clitoris, though my friend Dr. J. C. Nott, who was present at the operation, thought it might possibly be non-malignant, and such as Sir. J. Y. Simpson has described under the term of "caruncle." The tumor was about the size of an English walnut, had all the characteristic appearances of vegetating epithelioma, and required but a few months for its development. It was removed by means of the cautery-knife (Fig. 3), and the patient left the hospital well, but has not since been heard from.*

CASE VIII.

VEGETATING EPITHELIOMA INVOLVING THE WHOLE CERVIX.

For a full report of this interesting case, of which the following is a synopsis, I am indebted to Dr. C. H. Giberson:—

Mrs. ———, aged 32, the mother of two children, and a widow for ten years; eldest child healthy, but the younger, now ten years old, has spinal curvature. She says a married sister died at 36, of "what was called cancer of the womb." Has had almost constant hemorrhage for the past thirteen months and seems to grow steadily worse, until now (April 15th, 1872) she is very anæmic and much depressed in spirits.

Examination revealed cauliflower growth involving the entire vaginal cervix, and extending slightly into utero-vaginal attachment on either side.

April 23d she was examined by me and the condition found to coincide with the above description. April 26th the tumors and cervix were removed by cautery, much in the same manner as that detailed in case No. 6, but with this addition, that after all that could be embraced within the loop had been taken away, suspicious spots on the vaginal duplicature were excised by means of the cautery-knife. When the operation was completed the uterine cavity measured 1½ inch.

May 10th. Wound presents a healthy granulating appearance.

June 1st, five weeks after operation, healing process going on rapidly; uterus measures two inches in depth, the increase being due to filling up of deep cavity made by cautery.

June 20th. Dr. Byrne examined her and found a small granulating surface and looking well. Iodo-glycerine applied to surface. First menstruation since operation appeared June 8th and lasted moderately three days.

July 31st. Uterus 2¼ inches deep, os small, no leucorrhœa, vaginal and uterine surfaces smooth and soft, very slight point to right of os of granular appearance. General health good, but complains of shooting pains in lower abdomen.†

September 30th. Third menstruation, lasting three days, has passed over without trouble.

October 12th. Considerable pain and slight occasional flow during the past ten days until yesterday, but vaginal examination shows no ulceration and no induration perceptible.

Since the above report (October 12th) the patient is doing well, but it is evident that her case is a less promising one than could be hoped for, and hence I have thought proper to present it as a darker side of the picture.

She has no cachectic appearance, however, but on the contrary looked to me so much stronger and healthier, when seeing her in the street two or three weeks ago, that I hardly recognized her. Nevertheless I look forward to her future history with much interest and some little misgivings.

* Traction by the cautery instrument should, in *all such cases*, be carefully avoided, and the instrument kept steady and in the same position from the beginning to the end of the operation.

† Dr. Nichol.

* Two operations were resorted to in this case, within the last month, tearing away, each time, large masses of suppurating vegetations and thoroughly cauterizing the subjacent surface.

† The increased depth of the uterus, as noticed at this examination, is due to a filling up of the excavation by *healthy* granulation, and is not peculiar to this case.

CASE IX.

VEGETATING EPITHELIOMA INVOLVING THE WHOLE CERVIX.

Mrs. ———, aged 45, has had seven children and two miscarriages; the last living child seven years old. Menstruation has always been regular up to six months ago, when the flow became excessive and the interval less and less, until now (April 18th, 1872) it is almost continual. On digital examination the whole of the cervix uteri was found very much enlarged and greatly indurated, but soft and spongy on its presenting surface, tender to pressure, and bleeding on the slightest touch. The body of the organ was not enlarged and the vaginal walls intact.

When brought into view the os was observed to be surrounded by what appeared like luxuriant granulations, though the unstripped parts of the cervix were in color somewhat paler than normal. The case was diagnosed as one of epithelioma in the early sprouting stage, and she was admitted into St. Mary's Hospital for operation May 4th. The patient was anæsthetized and the entire cervix removed by the cautery, but the method pursued being so entirely similar to that of other cases already detailed, no further description is here called for. There was no blood lost during the operation, nor was there any secondary hemorrhage. Vaginal bathing with tepid water and carbolic acid was commenced on the third day after operation and continued for two weeks; sixteen days after the operation a speculum examination was made, and the surface from which the disease had been excised was almost entirely covered with healthy membrane, and the patient, feeling well and anxious to see her family, was permitted to leave the institution. She has not since been heard from.

Case No. X., being very similar to the above, offers no points of special interest to warrant a full report on the present occasion, and sufficient time has not yet elapsed to say anything of results, further than that they are not less promising than in any of the preceding cases.

Case No. XI. is that of the patient whose condition has been noticed (No. 4), and this second operation, like the former, was resorted to merely for the purpose of taking away such parts of the suppurating excrescences as could be safely spared.

With regard to the eleven cases of carcinoma in which, like the above, operative measures were resorted to for the purpose of affording temporary relief merely, the limits of this paper will not permit of their being referred to at any length. In seven of this latter class the disease had attacked both vagina and uterus to such a degree as to almost obliterate the one and utterly degenerate the other; yet in no single instance did the removal and destruction of such diseased tissues as could be safely reached fail to relieve in a very remarkable degree, and add to the comfort of these afflicted sufferers.

This single statement, it seems to me, supported as it is by actual observation, ought to satisfy those who question the utility of any operation in such hopeless conditions. It is surely no principle of conservative surgery to ignore palliative measures, even where disease is admittedly incurable; and yet, among the numerous victims of this terrible destroyer, how many a valuable life that might have been safely prolonged and robbed of much of its wretchedness has been allowed to ebb away in loathsome torment!

It is true, until very recently, non-interference in uterine cancers has been justifiable and eminently proper, owing to a want of the means whereby such ailments could be safely ameliorated, but I am fully convinced by past experience that this want no longer exists. However transitory, therefore, the relief may often be, I doubt the wisdom of those who in the face of facts would still persist in thinking that their whole duty had been performed by quoting a hackneyed axiom in the pathology of these diseases, which says: "When the patient's constitution has really become infected, these diseases, if extirpated, invariably return and conduct the person who is affected by them to inevitable destruction." *

It should not be forgotten, however, that in very many instances, the prolongation of life but for one month may be of the highest consequence to a family about to be deprived of a mother's influence and watchful care, even though that mother be a helpless invalid.

Furthermore, in order to determine as to the propriety of operations for the relief of such patients, there are, or ought to be, but two questions worthy of consideration, namely: Have we the means whereby such a course may be undertaken without risk to life, or in any way adding to existing evils? And secondly, Have we good grounds, *i. e.*, clinical data, for hoping to ameliorate the sufferer's condition thereby? Apropos of these considerations I submit the following case:—

CASE XII.

CARCINOMA OF UTERUS AND VAGINA. OPERATION PALLIATIVE.

Mrs. ———, widow, aged 30, has two children, and always enjoyed perfect health until some time in the month of January last. About this time menstruation, previously regular, appeared in great excess and lasted over eight days. This was followed by a copious watery discharge for two weeks, when metrorrhagia again appeared and hemorrhage on the latter occasion continued for ten days. A watery and whitish discharge as in the previous interval continued up to the first week in March, when, after a hard days' work as chambermaid in a hotel, she was seized with violent expulsive pains and almost fatal hemorrhage. She cannot remember how long the flooding lasted then, but on its ceasing she applied for admission and was received into one of the New York hospitals, where she remained for a few weeks without having had anything done for her. On Friday, the 10th of May, she applied at the College of Physicians and Surgeons in 23d street, and was examined by Professor Thomas, who at once discovered extensive carcinoma of the uterus, involving the vaginal walls anteriorly and posteriorly, and accordingly pronounced her case as utterly hopeless, which it certainly was. Under these circumstances she applied for admission to St. Mary's Hospital, May 13th, 1872, with a letter from Dr. Chas. S. Ward, who stated that he recommended the patient to see me, in hopes that I might be able to do something towards relieving her temporarily by galvano-cautery.

When admitted, she said she had not ceased flowing for several days past, and her wretched and bloodless countenance bore fearful testimony to the truth of this statement, for she was unable to move one step without support, and it was found necessary to administer stimulants freely before she could be safely removed to bed.

By digital examination I found the condition precisely as Dr. Ward had stated, and as the loss of blood was frightful, nothing could then be done beyond tamponing the vagina. This succeeded in arresting the hemorrhage; but on its being removed the following day it was evident that something of the kind would again be necessary, and a fresh tampon was applied. This latter was allowed to remain in 48 hours, and its removal not being followed by any return of hem-

* Müller on Cancer, etc. London, 1840, page 28.

orrhage, I decided to try what could be done by the cautery at the earliest possible moment.

The operation which took place on Saturday, May 18th, may be described as follows: The upper half of the vagina being packed with a large encephaloid-looking mass adherent on all sides, it was found impossible to loop more than a portion of it, so that after removing all that could be taken in this way a much larger proportion yet remained. The soft brain-like character of the outgrowth preventing the heated wire from acting as a hæmostatic, considerable blood was lost, and it was therefore determined to complete the operation as quickly as possible. This was done by grasping the more projecting parts of the mass by a strong polypus forceps and forcibly tearing them away piece by piece, until the greater part of the spongy excrescence was twisted off from the uterine cavity as well as the vagina. The cautery-knife was employed to trim off and scoop out whatever remained, and the dome-shaped cauterizer thoroughly applied to the whole subjacent surface. It was now found that the hemorrhage had entirely ceased, but as a security the uterine cavity and vagina were carefully tamponed and the patient put to bed.

Her daily record for the succeeding two weeks contains nothing of sufficient importance to warrant minute details. The tampon was removed 48 hours after the operation, and no hemorrhage whatever appearing, the vagina was ordered to be washed out twice daily with a mixture of carbolic acid, glycerine, and water.

No peritoneal or other inflammatory trouble followed this operation, and very many of her former pains and distressing symptoms were entirely relieved. Her appetite and sleep returned, and in three weeks she was strong enough to sit up and walk through the ward.

The purulent discharge following the use of the cautery continued for 15 days, after which appeared a slight, serous-looking, but yet entirely inodorous drain.

June 15th, the parts operated upon were carefully examined and found to be smooth, but uneven and somewhat hard to the touch, but, as far as the eye could reach, seemed to be covered with some kind of membrane, and manipulation provoked no hemorrhage. A steady improvement has been observed in her appearance from day to day, and now feeling comparatively strong and being anxious to visit her friends she was permitted to leave the hospital. I regret to add that I have not been able to trace her whereabouts since.

Cases, of which the preceding one may be considered a type, might also be related, had I not already far exceeded the proposed limits of my remarks. I deem it proper to state, however, that in three out of the ten cases of pelvic encephaloid cancer operated upon, the disease, though limited, included the whole uterus, and these were by far the most unsatisfactory of this class. In one case, a patient of Dr. Sims, I operated twice, and though in the second effort he, Dr. S., scooped out large quantities of the diseased mass from the uterine cavity by means of his curette, preparatory to the application of the cautery, and despite a very complete charring of all the denuded surfaces within reach, the bleeding excrescences were rapidly reproduced. This lady, who resides in another State, though not improved by what had been done, was certainly made no worse, and in accordance with advice returned to her home.

Altogether, from what I have observed in these three cases, I believe but little if any advantage can arise from the use of the electric cautery in carcinoma of the body of the uterus, when this organ has been the starting point of the malady, and when the cervix has already been destroyed by the disease in its upward march.

The next case to which I shall refer is one of interstitial fibroid or perhaps what might more properly be designated diffuse fibrous hyperplasia of the right half of the uterus.

CASE XIII.

INTERSTITIAL FIBROID.

Miss ——, aged 22, sought advice on account of menorrhagia, in March, 1869, which had existed for about 12 months previously. At this time her friends stated that she seemed to be increasing in size, and that a hard swelling had been noticed towards the lower and right side of her abdomen, but no examination was made until August of the same year. At this period a large globular and firm tumor was found occupying the right iliac fossa, and a digital examination per vaginam discovered the os uteri dilated to its utmost capacity and this same body presenting. The margin of the open cervix was traceable only to the extent of one-half its circumference, the remaining or right half being continuous with the intra-uterine tumor. Menorrhagia was very profuse, and each catamenial period was likened to a severe and prolonged labor, being attended with violent expulsive pains of an intermittent character. In September, 1869, an attempt to draw down the tumor was made with a view of removing it, but its sessile character was such as to render the effort impracticable.

In December, 1869, Professor Barker saw the case in consultation with her attending physician, Dr. Schapps, diagnosed a recurrent fibroid, and discouraged any attempts for its removal. Up to November, 1871, the tumor continued to increase in size upward as well as within the vagina, and extended from two inches above and to the right of the umbilicus down to the vulva. The pelvic cavity was now completely filled up with this firm, irregularly-lobulated mass; defecation was seriously impeded, and the frequent use of a catheter was called for to empty the bladder, which could only be

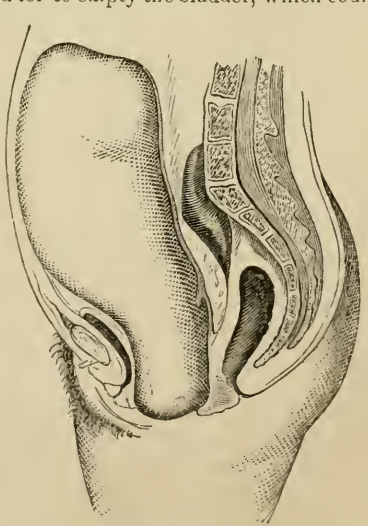

Fig. 11.

entered by a long flexible one and with much difficulty. Menorrhagia was not so excessive as formerly, but the violent expulsive pains already referred to still recurred with each catamenial period. She was now in a most deplorable condition from long suffering and loss of blood, and at this period in her history I saw her for the first time at the request of Dr. Schapps.

By placing the patient on her side and drawing back the perinæum, a sound could be passed into the uterine cavity, and plainly felt through the abdominal wall above and to the left of the umbilicus, and the depth measured at least ten inches. The vaginal mass was firm and elastic to the touch, and numerous large-sized blood-vessels were observed ramifying on its surface. An attempt to remove this intra-vaginal part by galvano-cautery was now proposed and consented to. The operation, which took place November 15, 1871, may be described as follows: A strong semicircular needle, seven inches in length exclusive of handle, with eye 3-8 of an inch from point, and carrying a heavy thread, was made to penetrate the tumor posteriorly as high up as could be reached, and was pushed forward until the point could be felt behind the pubic arch, provision being made to protect the urethra from injury. A slight additional force enabled me to reach the thread by means of a tenaculum, and the needle was withdrawn, while one end of the thread was brought down anteriorly. A strong platina wire being attached to the cord, was next drawn through and made to take the place of the latter. At this stage some trifling hemorrhage was observed. A connection was now made to the battery, and by very slow traction, occupying at least fifteen minutes, the tumor was split down longitudinally, and thus divided into two nearly equal halves and without loss of blood. The left half of the mass was now looped, and its removal effected with comparatively little difficulty. An effort was next made to dispose of the remaining portion by the same process, but after repeated trials this method was found to be impracticable, principally on account of its more irregular and conical shape. Recourse was now had to the cautery-knife, with which the whole was removed piecemeal, and all irregular projections within the pelvic cavity being trimmed off, the operation, which lasted two hours and a quarter, was thus completed.

The patient's recovery from the effects of the operation was rapid, and unattended by the slightest inflammatory symptoms or irritative fever. Relief from the more distressing symptoms was complete; her appetite and strength rapidly returned, and though no attempt at spontaneous enucleation of the upper segment of the tumor took place, an occurrence faintly hoped for, yet her general health continued to improve, and for a period of over six months her life was one of comparative comfort.

In the early part of June, however, Dr. Schapps informed me, that though the abdominal part of the tumor had not apparently increased, the pelvic growth had to some extent reappeared, and the menstrual expulsive pains returned with much severity.

On the 15th of last August I was urgently requested to see her, on account of great difficulty having been found by Dr. Colt, Dr. Schapps being then in Europe, in emptying the bladder by catheter, following an unusually severe and long-continued attack of her periodical expulsive pains. Her suffering was described by her mother as equal to a severe labor, and she was hourly expecting a return of the same agony, which, in her now emaciated and anæmic condition, it was thought impossible she could survive. The tumor was to be seen bulging out between the vulva, and a flexible catheter was passed into the bladder with much difficulty. On the night of the 17th she was seized with the dreaded pains, and during one violent paroxysm a large part of the tumor was forced through the vaginal outlet, lacerating in its passage the perinæum and one side of the vulva.

Its size, shape, and general appearance will be understood by reference to the above illustration; and the dotted lines indicate the form and position of its upper pelvic and abdominal portion.

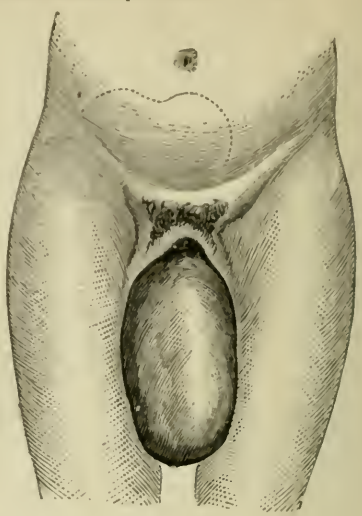

FIG. 12.

The protruding part measured 9 inches in length, and from 14 to 15 inches in circumference. For a space of two or three inches from its lower end sphacelated discoloration was observed, and the odor of decomposition was strongly marked. Numerous large blood-vessels were seen ramifying on its surface, the upper two-thirds of which was of a deep red color, from interruption in its circulation; while in consistence it presented the firm character of an ordinary fibroid.

THE OPERATION.

The patient being anæsthetized, powerful traction was made below, while steady pressure was kept up on the supra-pelvic extremity of the tumor; but after continued efforts it was found impossible to bring it down more than one inch beyond the position it had already attained, owing in part to its connections within, but principally on account of its larger dimensions above. A double ligature of strong whip-cord was now passed from behind forward through the centre of the tumor, immediately outside the perineal commissure, steady traction being all the time kept up, and the mass ligated in the usual manner, the principal object being to insure full control of the stump during and after excision. As the vascular appearance of the parts forbade the use of any ordinary-sized platina wire, a piece six inches in length of No. 16 (Stubb's gauge) was fastened by binding screws between the two conducting cords of the battery, and curved so as to adapt itself to the contour of the tumor. This was now applied, *while cold*, to the under surface, half an inch below the ligature; and all being in readiness, the battery was next immersed, and the heated wire slowly carried around the tumor, as in circular amputation, thus effecting a deep fissure, and completely sealing up the superficial vessels. The battery was now raised and the wound examined, but no disposition to hemorrhage was observable. The wire was next applied to the under surface of the tumor as in the first instance, the battery reimmersed, and by a slow and steady see-saw movement the whole mass was cut through. Though the ligatures had by this time become quite loose from traction, there was no bleeding from the stump; nevertheless, in order to guard against secondary hemorrhage, the whole surface was well seared over a second time,

and the dome-shaped cauterizer pressed into every suspicious point.

The stump was then returned within the vagina, and an anodyne suppository of belladonna and morphine ordered, but no dressing to the wound was used or deemed necessary.

As space will not permit a detailed record of her progress after the operation, I will merely add, that though suffering from two extensive bed-sores, she improved rapidly and without the slightest symptom of local inflammation or irritative fever. The ligatures were allowed to remain for three or four weeks, with the hope of effecting some reduction in the upper tumor by drainage; but their presence giving rise to a good deal of annoyance, and for other obvious reasons, they were taken away.*

CASE XIV.

CASE OF SESSILE INTRA-UTERINE FIBROID.

Mrs. D., aged thirty, widow, has had five children and one miscarriage. Menstruation was always regular up to two years and a half ago, when her periods commenced to be prolonged and the flow excessive. She states that she has been under observation at Bellevue Hospital for about three months previous to her admission into St. Mary's, which was on the 15th of April, 1872. Her metrorrhagia had been for some time past almost continual, and as she was very much reduced from loss of blood, it was deemed best to prescribe rest, nourishment, and local astringents, before submitting her to the ordeal of a thorough examination. On the 1st of May, her condition having greatly improved, an investigation was made with a view to diagnosis and with the following result: Above the pubis and a little to the left was noticed a firm globular tumor in size about that of a four months' pregnant uterus, somewhat tender to the touch, and slightly movable from side to side. A digital examination revealed the presence of an intra-uterine tumor presenting within the os, which was soft and dilated to the extent of a silver dollar. The growth resembled an ordinary fibrous polypus, and it appeared to be free and detached from the uterine wall as far as the finger could reach, but owing to its large size (being about that of a human heart, which in shape and consistence it resembled), and as in its upper half it seemed to fill the entire cavity, the true character of its connection could not then be made out. I had not the good luck at this time to be made acquainted with the simple and ingenious device of Prof. Thom, as by the aid of which I have no doubt I might have been able to estimate the extent of its attachment.

The case was therefore diagnosed as one of intra-uterine fibrous polypus, and most probably pediculated. It should also be stated that manipulation with the sound failed to give any clear idea of the nature of its attachment.

On the 4th of May, the patient being anæsthetized, the cautery loop was passed into the uterine cavity and over the tumor; but as the latter was now found to be much less movable than at first supposed, this step in the operation was attended with the utmost difficulty. I soon noticed that the wire could not possibly be made to embrace the outgrowth sufficiently far up to remove it entire, and now for the first time the real character of its attachment admitted of little doubt.†

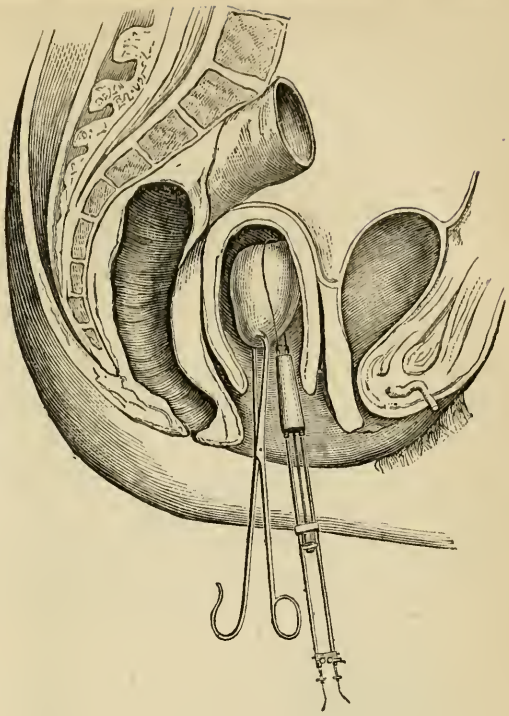

FIG. 13.

A strong vulsellum forceps, being once more carefully passed through the loop and into the cavity, was opened, and the apex of the tumor laid hold of. Firm traction to the extent of partially inverting the uterus was then steadily maintained, while the loop was passed up as far as possible and tightened. The conductors were next attached and the battery immersed, when by a slow movement of the screw in the loop-handle the part embraced was cut through and removed. Space being now afforded for the introduction of two fingers, it was found that but little more than one-half of the tumor had been taken away. A repetition of the proceedings just described resulted in the removal of the remaining half, the surface from which it was taken being slightly elevated at its circumference, and seemingly about 2½ inches in diameter.

No blood was lost during the operation beyond what would necessarily come from handling the parts, nor was there any secondary hemorrhage. The uterus was injected daily with a weak solution of carbolic acid and vinegar, and the after-treatment in other respects consisted of beef-tea, milk punch and tonics, with an occasional anodyne suppository. Two weeks after the operation there was a trifling bloody discharge when the uterine cavity was explored by a polypus-forceps, and a portion of slough removed. A strong solution of iodine was then freely applied and no further bleeding occurred. On the 30th of May, twenty-six days after the operation, the cavity of the uterus measured a little over three inches, and as the patient seemed to be daily improving, she was pronounced out of all danger. She left hospital on the 3d of June.

CASE XV.

FIBROUS POLYPUS OF THE UTERUS.

Kate ———, aged forty-five, unmarried, had always enjoyed good health and menstruated regularly up to June, 1870. About this date she says the intervals be-

* A third operation has since taken place, and will be described before the close of this paper.

† The attachment of the tumor is not quite correctly represented in the above sketch, the upper portion being less spread out and proportionately narrower than the actual condition observed would warrant.

tween her courses began to be prolonged and the flow scanty, but that towards the end of December she was taken with "flooding," which lasted two weeks. Throughout the year 1871 she had attacks of metrorrhagia, sometimes lasting for ten and even fifteen days, and for the cure of which she stated she had taken "a power of medicine." She noticed some increase in the size of her abdomen, but it did not engage her attention to any extent; and on the 30th of December, 1871, she was seized with severe hypogastric pain and "bearing down," when a large tumor made its appearance outside the vulva. Dr. J. P. Dwyer was now called to see her, diagnosed a fibrous polypus, and recommended her to be sent to St. Mary's Hospital for operation.

On examination the tumor was found to be firm and lobulated, and in size about twice that of a closed hand. Its pedicle, which measured about four inches in length, was round, and about one inch in diameter at its smallest part, which appeared to be midway between the tumor and its uterine attachment. Affixed to the pedicle, about an inch and a half from the tumor, was a small pediculate fibroid outgrowth.

On attempting to pass a sound into the uterus, which appeared fully dilated, it was found impossible to carry it beyond one inch anteriorly and less than half that distance either behind or in a lateral direction. A

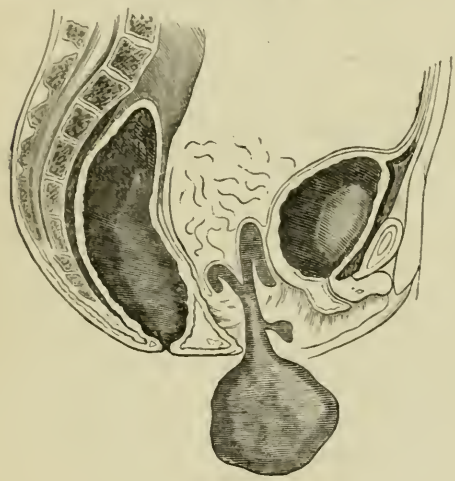

Fig. 14.

finger passed into the rectum came in contact with a firm body as far as could be touched, and conjoined pressure over the pubes failed to convey any very definite idea as to the form or position of the fundus. Nevertheless, partial inversion of the uterus was diagnosed, and accordingly, *instead of proceeding to sever the pedicle near what seemed to be its uterine insertion, the point selected was half an inch above the little secondary outgrowth. When the heated wire had passed through and the tumor was removed, the uterus was found to have reverted itself and the cavity measured over three inches in depth.* Two weeks after the operation the patient was discharged cured.

THE HISTORY OF YELLOW FEVER ON THE SPANISH WAR SHIP NUMANCIA.

By S. OAKLEY VANDERPOEL, M. D.,

HEALTH-OFFICER, PORT OF NEW YORK

The Spanish war-ship *Numancia*, with a complement of nearly five hundred persons, entered this harbor August 14, 1872, and anchored above the Narrows on the Staten Island side, about a mile from Fort Tompkins and the village of Stapleton respectively; forming the apex of a triangle with respect to the location of those places.

Coming from Havana, she should have been visited by the boarding-officer, and anchored in the lower Bay. The anchorage above the Narrows was in direct violation of the following instructions:—

Health Officer's Department,

Quarantine, May 1, 1872.

Masters of vessels and pilots will please observe that on and after May 15, all vessels arriving from the following ports will be boarded and examined from the hospital ship in the Lower Bay, viz.: All ports in the West Indies, Bermuda, Mexico, the Spanish Main, the East Coast of South America, and the West Coast of Africa; also, all vessels from ports where cholera or yellow fever prevailed at the time of departure, or upon which cases of cholera or yellow fever have occurred during the passage.

S. Oakley Vanderpoel, *Health Officer.*

On remonstrating with the pilot for disobedience of orders, he replied that he was aware of so doing, but the great draught of the vessel rendered it unsafe to anchor in the Lower Bay. Relying upon his knowledge of the waters, I reluctantly assented to the presumed necessity of her remaining in that position, and took immediate measures to protect the surrounding community from the danger of contagion.

General History.—The *Numancia* may be classed among the largest of iron-clad vessels of war. Her tonnage was about seven thousand tons, and her draught nearly or quite twenty-eight feet. She was therefore probably deeper than any vessel which had previously entered this port.

The vessel is about six years old, and has been cruising most of the time. At different periods, three years of that time have been spent on the West Coast of South America, and three years in the West Indies—mostly, of course, at Cuba, in the ports of Gibbane, Guanturemo, and Havana.

Medical History.—No sickness appeared on her when on the South American Coast, but she had not been six months at Cuba before yellow fever appeared. Every year since, whenever she has cruised in stations where external circumstances of temperature and moisture favored, fever has appeared, even though no cases may have existed on shore at the time.

Before leaving Havana this trip, she had shipped a crew largely composed of men who had previously had the fever, hoping it would run out for want of persons susceptible. At the time of leaving there were no cases of fever on the vessel. Two or three days out, the first case appeared, which was followed by others in rapid succession until the first of September. It is probable the vessel, instead of entering this port, would have kept on to a colder latitude; but as she started for New York to undergo quite extensive repairs before leaving for Spain, she was only coaled enough to reach this harbor.

The following detail of cases was kindly furnished me by Dr. Carbo, the skilful surgeon of the ship. While there is nothing striking in their general features, still the genuine characteristics of the disease were so marked, and so little complicated with the deadly malarial fevers which in many respects simulate yellow fever that the permanent record may not be without its benefits. As there were over forty cases reported, only the most interesting are here presented.

At Sea,
Steam-Frigate Numancia,
August 5, 1872.

Don Estanislas Garcia Loranca, second doctor of the ship; age — years; sanguine temperament, robust constitution. Advises that he feels unwell without knowing the cause. As prominent symptoms he complains of a very bad pain in his forehead, vague pains in his waist and loins, with simultaneous chills. He has fever, with dry skin, tongue good, and red eyes. Prescription—Emetic of ipecac; lemonade as often as desired, and cold-water bandages to the head.

Afternoon.—Dry cupping over lumbar region, chloroform ointment, sudorific, sinapisms to the lower extremities.

6.—Swollen face, somnolency; skin warm and dry; pulse very active and hard; tongue slightly slimy; intense pain in the forehead, and not so intense in the spine. Saline purgative; sinapisms to the lower extremities; chloroformed frictions on the loins; cold-water bandages to the forehead.

Afternoon.—Same symptoms. Scarified cuppings on the nape; a full potion of aconite.

7.—Swollen face. The heaviness of the head has decreased a little; the pain however continues; pulse still hard, but not so active; skin warm and dry; tongue whitish, and stomach nauseated; lethargy; sleep difficult; uneasiness. A potion of aconite; carbonic acid; water every two hours; laxative enema; cold-water bandages on the forehead.

8.—Pulse somewhat decreased; skin less warm, and he gets some repose; head rather heavy; tongue sabulous and dry; sensitiveness in the epigastrium; some nausea. Stop the aconite potion. Æthereal mixture in full doses; carbonic water; cold-water bandages on the head, and warm vinegar bandages on the epigastrium and hypochondria.

9.—Pulse regular; skin cool; tongue sabulous and rough; little tolerance in the stomach; passes water regular; head heavy. Æthereal mixture; tea with alcohol of Mélise; three half-cups of cold broth; cold-water bandages on the forehead i sugar and water to drink as often as wanted.

10.—Pulse depressed and slow; skin cool; prostration; tongue somewhat moist; great sleepiness; dark-colored urine; four half-cups of cold broth with sherry wine; water and almond-juice as often as wanted; stop all other medication.

11.—Pulse scarce and weak; cold skin; bilious suffusion; yellow sclerotic; tongue wet and white; great dismay and prostration; nasal hemorrhage; antiseptic decoction every two hours, with simultaneous drinks of perchloride of iron; broth with wine; stop the almond juice, and take instead sugar and water with alcohol of Mélise.

12.—Suppression of the hemorrhage; same general condition; stop the iron; antiseptic decoction continued; two broths and one soup with wine; aromatized water to drink as desired.

13.—The yellow suffusion increases; same exhaustion; dark-colored urine, and repeated intolerance of stomach; cold water and carbonic water; antiseptic potion; strong soup and food in the evening; sherry wine.

14.—Somewhat better; intolerance of stomach; alimentary vomiting; tongue in good condition; pulse weak; same treatment; decoction of bread as often as wanted; will get up.

15, 16, 17, 18.—During these days the food and potions have been unwelcome to the stomach. The alimentary substances and medical means have been changed. Use has been made of morphia, bismuth, rhubarb, and bicarbonate of soda, without obtaining any favorable result, until æther in high doses conquered the excited condition of that viscera, producing its quiet. Exhaustion has been maintained to an alarming degree, but it soon gave way with regular digestion.

19.—Convalescent; infirmary ration; æthereal potion; bitter ptisans.

20.—Nothing new; same treatment.

21.—General improvement; stop æther potion.

22.—No medication; ration ad libitum.

23.—Walked out.

24.—Discharged.

YELLOW FEVER, MILD AND COMPLETE.—CURED.

August 5.—Antonio Martinez, a second corporal of marines; 28 years; temperament nervous and sanguine; constitution moderately robust. He complains of having caught a cold; has fever; eyes somewhat injected, and some pain in his waist; sudorific infusion and foot-bath.

August 6.—The night was bad; pulse active and hard; swollen face; pain in the waist more decided. Vomit of ipecac; sudorific, and lemonade as often as wanted.

August 7.—Fever abated; pain in the waist disappeared; head is heavy; tongue dry and sabulous; a saline purgative; four scarified cuppings on the nape; lemonade without restriction; no food.

August 8.—Has slept but little; pulse normal; tongue cleaner; head easier; the spinal pains have reappeared; scarified cuppings over lumbar region; cold-water bandages over the forehead; lemonade without restriction, and purgative enema.

August 9.—Some improvement is perceptible in his general condition; all pains have disappeared, and he has slept pretty well; tongue cleaner; lemonade as often as wanted; a broth in the afternoon.

August 10.—More improvement; pulse slow and soft; stop lemonade; antiseptic decoction and three broths.

August 11, 12 and 13.—Getting better; stop antiseptic.

August 14.—Half-ration; no medication; get up.

August 15.—Convalescent.

August 16, 17.—Convalescent; full ration with wine; promenade.

August 18.—Discharged.

YELLOW FEVER—ADYNAMIC FORM.

August 6.—Manuel Vuente, a sailor of the first class; 26 years old, nervous; sanguine temperament, with a deteriorated constitution; complains of pains in his waist, chills, headache, and tongue good; says he never had a fever during his stay in Cuba; emetic of ipecac, followed by a cup of chamomile, and lemonade without restriction.

August 7.—The fever continues; pale face; warm feet; pain in the waist continues, tongue sabulous and narrow; could not sleep last night. Purgative sulphate magnesia; dry cuppings over loins; lemonade without restriction; no food.

August 8.—There is fever still; heat of skin has decreased; long and sighing respiration; pains in the waist have disappeared; tongue rough and dry; nausea; drowsiness. A potion of castor-oil, sulph. quinia with ext. valerian; lemonade.

August 9.—Remarkable prostration; pulse is down; skin cold and yellowish; constant lateral decubitus, and comatose condition; urine scanty; stop preceding medication, and take instead antiseptic potion; mineral lemonade without restriction, and a blister between the scapula.

August 10.—Lingual hemorrhage; slow pulse; cold

skin; not so drowsy; increased jaundice; urine scarce; antiseptic potion; perchloride iron internally; stop lemonade; two broths; embrocation of mallow ointment, with oil of turpentine and ammonia on the hypogastrium.

August 11.—There is still some extravasation of blood in the mouth; cold skin and slow pulse; abundant urine; roughness of the tongue continues; same treatment, and as the comatose state still exists, blisters have been prescribed for the lower extremities.

August 12.—Continued nausea, and the yellow color of the skin becomes daily more marked; also the greatest prostration; stupefied state.

Add to the preceding medication, morning and evening, enemas of Peruvian bark and camphor, and let a denudation be produced in the epigastrium with ammonia fomentations; stop the broth.

August 13.—Persistent vomitings; which are so far nervous, only throwing up the liquid resulting from the imbibed substances; great prostration; disappearance of the lingual hemorrhage.

Potion of anti-emetic Riverio; enemas of Peruvian bark and perchlorate iron; frictions of warm vinegar, on the extremities; apply to the blisters on the epigastrium ointment of chlorohydrate of morphia.

August 14.—Cessation of the vomiting; patient in great exhaustion. Same treatment, adding cold broth with sherry wine.

August 15.—Yellow color of the skin is still exhibited; great prostration. Same medication, and cold broth three times.

August 16, 17.—With above treatment good results are evident; patient says he has good rest; stop the enemas, and the frictions of warm vinegar; take only the antiseptic potion and the broth, and sherry wine.

August 18, 19.—He improves; soup in the morning and the evening; wine and the antiseptic; on the 23d he takes half-ration; takes citrate iron and Peruvian bark.

September 2.—Whole ration.

September 14.—Discharged to-day.

YELLOW FEVER—COMATOSE FORM—DEATH.

August 7.—Don Modesto de la Goudra; a lieutenant; 26 years; of very strong constitution, and a sanguineous temperament, without any known idiosyncrasy; has presented himself twenty-four hours after being invaded, without knowing the cause of his disease. pulse 96; skin dry and warm; intense cephalalgia, and weariness in the bones; much drowsiness; tongue clean, moist and wide; not very thirsty; sighing respiration. Emeto-cathartic of tartarized antimony grs. ij; and sulphate magnesia ʒ ij; mineral lemonade as desired, and keep warm in bed.

August 8.—Abatement of the fever; pulse 82; skin moist and warm; head is not so heavy, and patient says he feels better; conjunctivas are clear; spinal pains; no passage of urine. Purgative sulph. magnesia ʒ i; dry cupping on the nape.

August 9.—Pulse high; skin dry; drowsiness; no urine; anxious breathing; tongue sabulous; he is slow to answer, and the eyebrows are contracted; wide-legged decubitus. Three scarified cups on the neck; cold bandages on the forehead; enema with the sulphate of magnesia.

Evening.—Same condition; twelve leeches on the mastoid apophyses; potion of musk and camphor; sulphurous lemonade as often as wanted.

August 10.—Slow pulse; cool and dry skin; remarkable paleness; the comatose condition continues; a passage of water has occurred; the hemorrhage from the leech-bites has continued during the night; in the morning coffee-like stools, and vomiting of same matter; a blister on the epigastrium; potion of Peruvian bark; enema ditto; ointment of morphia on denuded blister; sulphurous lemonade as desired.

Evening.—Coffee-like vomits continue; great slowness of breathing; oppression; same treatment with addition of the ointment of belladonna on the chest, and increase the morphine locally.

August 11.—Pulse 64; tongue dry and shrivelled; bloody stools; no vomiting; no urine; mucous rattle in the throat; indifferent decubitus; skin cold and viscous; less drowsiness; sulphurous lemonade; enemas of Peruvian bark; morphine externally; blister to the extremities.

August 12.—A.M.—Growing cold rapidly; almost in a state of insensibility; yellow face; clonic convulsions; antispasmodics and external heat; died at 11¼ A.M.

SERIOUS CASE—CURED.

August 7.—Don José Adra, baker, 28 years old, of a sanguineous lymphatic temperament, of a weak constitution, and moderate development, presents himself, with an intense cephalalgia; high fever; pain in the waist, and feeling cold; emeto-cathartic; lemonade without restriction; and sudorific in the evening.

August 8.—Intense pain in the forehead, and the spinal pain continued; tongue sabulous; high fever; uneasiness. Oleous purgative potion; lemonade, cold bandages on the forehead, and scarified cupping on the nape.

August 9.—The headache has abated; the pulse is not so high; nausea and rheumatic pains in the anterior part of the belly; cold bandage on the head; ointment of belladonna on the belly, and æthereal potion internally.

August 10.—The head is free; the pulse slow; great prostration; the conjunctiva and skin yellowish; throwing up of blood; sclerotics yellow; tongue moist and wide; nausea continued; antiseptic potion; a blister on the epigastrium; potion of Riverio; broth in the evening.

11.—Prostration continued; the yellowish color of the skin less pronounced; antiseptic potion; broth twice, and the nausea having disappeared, a dose of Riverio's anti-emetic was prescribed; the blister has been cured with morphine.

12.—The patient is in high spirits; the pulse is growing higher; the yellow coloration of the skin is rapidly disappearing; antiseptic, and three cups of broth with soup and sherry wine.

13.—Remarkably better; skin warm; pulse rather full; soup, and no medication; sherry wine.

14.—Nothing new; half-ration, and convalescent.

16.—Convalescent and whole ration.

17.—Left the hospital.

COMPLETE ATAXIC FORM.—FATAL.

August 10.—José Serret, a sailor of the 1st class, 22 years old, of a sanguineous temperament, and a good constitution; on this day he presented himself at the infirmary of the *Numancia* with all the characteristic symptoms of the invasion of the fever. On the 13th of same month he went to the hospital, and notwithstanding the use of all the resources of science, the disease could not be checked. This individual died in extreme excitement and delirium. It was a remarkable fact in his case that in the course of his disease he never had dark vomits or stools. However, there was no deviation from the established diagnosis.

YELLOW FEVER OF A CONCENTRATED FORM.—FATAL.

August 10.—Domingo Vila, a fireman, 34 years old, of a sanguine lymphatic temperament; constitution ap-

parently strong, with a humoral excess; remarkable obesity and general decoloration of the skin; has felt unwell for the last thirty-six hours, and presents himself with bad pains in the forehead and spine; general lassitude; no congestion of the conjunctiva; skin warm, and pulse hard and quick. Emetic-cathartic and sudorific.

11.—A little easier; has slept somewhat, but the excitement is very great; skin dry; pulse regular, rhythmical, with 72 beatings; less pain in the head and extremities; tongue dry, rough, and sharp-pointed; there have been large stools in the intestinal tube; no passage of water for the past two days; pain in the hypogastrium, but no swelling of the region; he answers slothfully and confusedly; oleous potion; morphine internally; friction on the pubis, with ointment of turpentine and ammonia.

Evening.—Same condition; more uneasiness; great pain in the bladder; no passage of water; difficult breathing; morphine internally; blisters on the extremities; and the general condition of the individual not permitting a sitting bath, the catheter was applied to the bladder. Only some drops of urine were extracted.

12.—Skin cold, yellowish and viscous; partial perspiration of the chest and head; lassitude; pulse scarce, contracted, and slow; difficult breathing; mucous stertor; inflated face; shrivelled tongue; short stools without a special character; no passage of water.

Caustic between shoulders; bandage with warm vinegar on the lower extremities; enema of sulphate of quinine gr. xxx; pills of valerian, camphor and zinc.

Without any remarkable disturbance he died at two o'clock this afternoon. From an attentive observation during the last hours of his existence, the slow and gradual extinction of the innervation of the muscles of organic life could be perceived.

FIRST PERIOD.—CURED.

August 11.—D. José Fuentes, first mate; 40 years old; of a sanguineous nervous temperament, and very robust constitution; has been attended to a few hours after being invaded. There is no known cause for his complaint. Cephalalgia; dryness of the mouth; pains in the extremities, especially in the loin; swollen face; injected eyes, and the pulse active and hard.

Emeto-cathartic and sudorific in the morning, and in the evening, cold-water bandages on the head; sinapisms on the feet; scarified cuppings on the neck, and lemonade without restriction.

12.—Complete abatement of fever; disappearance of pains; insomnia; head rather heavy; tongue wide, moist, and white; free urine; cold bandages on the forehead; mineral lemonade without restriction.

13.—Repose and prostration; tongue slightly sabulous; oleous potion of Palma Christi oil; solution of gum and lemon-juice; vegetable lemonade as often as wanted.

Evening.—Remarkable prostration; slow pulse; bowels rather loose; cold broth; decoction of bread as often as wanted; stop the lemonade.

14.—Complete convalescence; soup and no medication.

15.—Half-ration, with wine.

17.—Whole ration, and out of infirmary this last day.

CURED.

August 11.—Francisco Battle, sailor of the second class, 22 years old, temperament sanguineous-nervous, good constitution, reports that he feels unwell for a few hours, and that he never complained of any internal disease while in Cuba. He is habitually subject to a conjunctivitis and blepharitis, which may be considered permanent. He feels pains in his head and legs, and has a fever; tongue clean; emeto-cathartic and sudorific in the night.

August 12.—The pain in the forehead continues; the fever is higher; tongue sabulous; a saline purgative, cold-water bandages on the head, and lemonade without restriction.

August 13.—Pulse less active; the skin very much less warm; tongue whitish. There is still pain in the forehead; cold water on the head: sudorific lemonade.

August 14.—Pulse not entirely down yet; uneasiness; the skin still warm. Infusion of lind flowers viij grs., and extract of belladonna gr. ij; laxative enema; lemonade as often as wanted.

August 15.—Skin normal; pulse regular and physiological; repose; tongue wide and whitish; cold broth once; repeat the lind flowers.

August 16.—General condition satisfactory; pulse slow and very depressible; skin cool; fungous gums and pustulous crustaceous efflorescence on his lips. antiseptic decoction; was sent this day to West Bank Hospital.

August 17.—Decoloration of the skin; ferruginous salivation; broth and wine three times; antiseptic potion, and lotions in the mouth with alum.

August 18.—Same condition and same treatment.

August 19.—He is better; there is no sanguineous exudation in the mouth; the pulse grows stronger; stop the lotions with the alum; antiseptic broth and two drinks of tea in the day.

August 20.—Getting better, only there is some prostration.

August 21.—Soup, antiseptic.

August 22.—Nothing new: discovers a great appetite; soup and antiseptic.

August 23.—Half-ration and no medication.

August 24.—Whole ration; convalescent.

August 27.—No alteration.

August 28.— Ditto.

August 29.—Out of infirmary.

FIRST PERIOD.—CURED.

August 13.—Felix Terrents, marine corporal, 28 years old; of a sanguineous temperament and athletic constitution, presented himself and stated that he never complained of any disease while in Cuba. He has a fever and a dry skin; swollen face, pains in the head and waist; vomitive; sudorific in the evening.

August 14.—Tongue wide and sabulous; pulse hard with 80 pulsations; uneasiness with weariness of the loin; saline and drastic purgative of sulphate of magnesia and jalap; sudorific; lemonade as often as wanted; dry cuppings.

August 15.—Pulse steady; pain in the waist continued; uneasiness; tongue plump and wide; potion of aconite; a mineral lemonade; scarified cuppings on the loin.

August 16.—Pulse slow and not so hard; tongue wide and whitish; has slept and perspired; water passes; potion of aconite; purgative enema; mineral lemonade.

August 17.—Is better; tongue all right; physiological pulse; sleeps deeply; three drinks of broth; stop the aconite; and lemonade without restriction.

August 18.—The same; 50 pulsations; three drinks of broth; sugar and water without restriction; tea in the evening.

August 19.—Is doing well; nothing disturbs him; strong soup; tea; on this day was removed to West Bank Hospital.

August 20.—Half-ration and convalescent.
August 22.—Whole ration.
August 23.—Whole ration and out of infirmary.

FEVER COMPLETE.—DECEASED.

August 18.—Miguel Riera, a sailor of the first class, and a nurse, of a sanguineous-nervous temperament and a regular constitution, age 27 years, has presented himself immediately on feeling unwell. On examination he is found to have a warm and dry skin, a quick and hard pulse; the face inflated, and he complains of an intense cephalalgia. Prescription for the evening, emetic and sudorific.

August 19.—The fever continues, skin less warm, some pain still in the head and cannot sleep; a saline purgative; lemonade as often as wanted; no food.

August 20.—Pulse still quick, red skin, congested eyes and a heavy head; uneasiness; tongue in good condition; oleous purgative; infusion of lind flowers with extract of belladonna; scarified cuppings on the nape, and flying sinapisms on the lower extremities.

August 21.—Pulse regular and not active; cool skin; head not so heavy; the coloration of the eyes has been dispelled; sabulous tongue; go on with the lind infusion; add a sudorific in the morning and in the evening; with lemonade as often as wanted.

August 22.—Slow pulse; lassitude; pains in the mesogastrium; indifferent decubitus; difficult and short sleep; tongue a little red on the point; the stomach is intolerant. Riverio's potion; antiseptic potion; frictions on the belly with ointment of belladonna. Enema of sulphate of quinine, gr. xxiv.

August 22.—*Night.* The pulse is slow and low; uneasiness; nausea; rough tongue, dry skin; Riverio's potion; sulphureous lemonade as often as wanted; blister on the epigastrium.

August 23.—A little better; moist and red tongue; not so uneasy; pulse in the same condition and a cool skin; same treatment as last night; cure the blister and repeat the enema of sulphate of quinine, gr. xx.

August 23.—*Night.* The uneasiness has reappeared and there is occupation of the stomach, which the patient manifests by a sensation of fulness. Stop the Riverio's potion, and take instead the æthereal mixture; cure the blister with ointment of morphine; sulphureous lemonade without restriction.

August 24.—He seems to be more quiet, but in a state of deep prostration. Tongue shrivelled and hemorrhagical; fuliginous teeth; rebounding pulse; urine very scarce; the general color quite livid. Potion of Peruvian bark; æthereal mixture; sulphureous lemonade and enema of sulphate of quinine gr. xxiv; lotions with alum in the anterior space of the mouth.

August 24.—*Night.*—Great uneasiness, sub-delirium, dry skin, and bloody salivation: stop the sulphureous lemonade; add to the preceding medication 2-5 of an ounce of hydrochlorate of morphine, and frictions on the whole extension of the lower extremities with warm vinegar.

August 25.—The lingual hemorrhage continues; small black vomit; bilious suffusion; the pulse extremely weak and regular; sub-delirium; potion of perchloride of iron; antiseptic potion, and cure the blister on the epigastrium with ointment of morphine; lotions of perchloride of iron for the tongue.

August 25.—*Night.*—Great abatement; short and anxious breathing; remarkable lividness; complete inaction; no vomiting, no lingual hemorrhage. Same treatment, stopping the morphine and adding two large blisters on the lower extremities. Died 30 minutes after midnight.

FIRST PERIOD.—CURED.

August 20.—Nicholas Quintrana, a pre-eminent sailor. This individual is of a strong constitution and was never sick in the island of Cuba. Yesterday he took an emetic on board the *Numancia* and to-day the most important symptom he presents is a congestion of the head with a high-colored face. There is also uneasiness, pains in the legs and the pulse is quick and dry. Drastic purgatives; lemonade without restriction, and eighteen leeches on the mastoid apophyses.

August 21.—The pulse is down to 82 beatings, red eyes, uneasiness, and warm skin; the tongue is moist and sabulous; purgative enema; cold bandages on the head, and potion of the infusion of lind flowers ℥ iij, with extract of aconite gr. vj, taking two spoonfuls every two hours.

August 21, *night.*—The excitement has increased, and there is some nervous vomiting; same medications, adding the Riverio's potion.

August 22.—A normal pulse; repose; vomits restricted; same medication.

August 22, *night.*—The good condition continues; a dry skin; the vomits have disappeared; stop the Riverio's potion; repeat the aconite and cold bandages; sudorifics; and for common drinking lemonade.

August 23.—A normal pulse, the general condition is favorable; the tongue is wide, moist and clean; two cups of broth taken for all medication; lemonade.

August 24.—Convalescent; strong soup; no medication.

August 25.—Nothing new.

August 26.—Will get up to-day. Half-ration.

August 27, 28, 29.—Going on very well; whole ration, and wine.

August 30.—No alteration.

August 31.—Ditto.

September 1.—Nothing new.

September 2.—Returned to service.

GRAVE RAPID FORM.—DECEASED.

August 22.—Juan Abad, a sailor of the first class, has presented himself this day at this infirmary from that of the *Numancia*, where he was treated for three days. On examination I find that he has a regular pulse, depressible and wide, the skin moist and warm, a lateral decubitus; tongue normal and moist; and dark-colored vomiting; some pain in the epigastrium; his intellectual powers regular expedite, and tendency to sleep; no urine; potion of perchloride of iron; carbonic water; small pieces of ice frequently; blisters on the lower extremities and the epigastrium.

August 23.—Great prostration; does not answer to any question; the skin cooler than yesterday, the pulse is perceptible enough and regular; lateral decubitus, no agitation; a sighing breathing; tongue rather red; black vomits and stools; no pass of water; same treatment; add enemas of perchloride of iron in the morning and evening; and cure the blister on the epigastrium with the morphine ointment. Died the next morning at 3 o'clock.

GRAVE AND RAPID FORM.—DECEASED.

August 22.—Gasper Peres, a marine corporal, 28 years old, of a sanguineous-nervous temperament, and a strong constitution, presents himself at the hospital coming from the frigate *Numancia*, where he was treated for two days as complaining of a cerebral fever. On examination here it is found that his pulse is strong and rather quick; skin warm and dry, a swollen face and injected eyes; an unconquerable uneasiness sub-delirium: coffee-like vomits and stools equally characteristic; Riverio's mixture; iced sulphureous lemonade;

blister on the epigastrium; enema of Peruvian bark with perchloride of iron.

August 23.—The pulse is quick and hard; very remarkable paleness; could not sleep during the night; convulsions; hiccough; no pass of water; the coffee-like evacuations, both ways, have become rare; a quiet delirium; carphologia; very slow breathing; iced sulphureous lemonade; æthereal potion; a high dosis; enema of perchloride of iron and Peruvian bark; blisters on the lower extremities.

Evening.—Died at 3 o'clock this afternoon.

GRAVE AND TYPIC CASE.—DECEASED.

August 24.—Esteban Ferrando, a sailor of the first class, of a sanguineous temperament and very strong constitution, states that during his last stay in Cuba he complained several times of intermittent fevers. He now presents himself with a pain in his forehead, also in the spine, weariness in his bones, an active fever and injected conjunctiva; prescription—emetic, sudorific, lemonade without restriction, and cold water to the head.

August 25.—The fever continues; his decubitus is lateral; head still congested; sabulous tongue; saline purgative; lemonade without restriction; scarified cuppings on the nape.

August 26.—The fever continues high; 92 pulsations; the skin is still dry and warm; permanent lateral decubitus; a heavy head; nausea; sulphureous lemonade; Riverio's potion.

August 26, *night.*—Dark-colored vomits, and diarrhœa not very abundant; the skin is dry and warm; the pulse slow and wide; a shrivelled tongue; æthereal lotion every two hours; stop the sulphureous lemonade; a half-spoonful of solution of perchloride of iron every half-hour. Enema of decoction of Peruvian bark ʒ iv. perchloride of iron gr. xl; flying sinapisms on the lower extremities; a blister on the epigastrium.

August 27.—He has been quiet during the last night. Drowsiness continues; a quick pulse and rather warm skin; lateral decubitus; the tongue is much better, moist and a good color; the dark-colored vomits and stools have ceased; enema of Peruvian bark and perchloride of iron; perchloride of iron internally and antiseptic potion. Give him a little ice frequently.

August 27, *night.*—During the day had vomits as black as ink, and stools of the same character; pulse very poor and intermittent; cold skin; slow and oppressed breathing; convulsions; a tremulous tongue, moist and wide on the point; no urine; lateral decubitus. Same treatment, adding blisters on the lower extremities.

August 28.—Same condition; but the skin is rather warmer, and the pulse quicker, though contracted; lateral decubitus; same medication; a half-cup of broth and sherry wine.

August 28, *night.*—Dangerously ill, the pulse is hardly to be found; he answered to no questions; tea with mint; a large sinapism on the anterior part of the chest, and on the lower extremities bandages with warm vinegar. Died at a quarter past ten on the same night.

ORDINARY FORM.—DECEASED.

August 27.—Vicente Segura, a sailor of the first class 28 years old, of a sanguineous-nervous temperament and a strong constitution, has presented himself with all the symptoms of the epidemic disease, and a remarkable uneasiness accompanied by some sub-delirium, which was attributed to the terror inspired by it, since the symptoms disappeared after the reaction took place. He had an emetic prescribed, and for the evening a sudorific; abstention of food and lemonade.

August 28.—He is much better; has no fever, and no vestige is perceptible in the encephalus of the past sub-delirium; no food; lemonade without restriction.

August 29.—He has been well last night; this morning he feels weary. Skin in good order, rather warm; normal pulse; tongue a little too red; great propensity to sleep; no food; sulphureous lemonade.

Evening.—A very slight increase of fever; enema of sulphate of quinine, gr. xviii.

August 30.—No fever; pulse remarkably slow; slow breathing; the tongue is sharp-pointed, and its extremity very high-colored; some agitation; sulphureous lemonade as often as wanted; warm bandages of water and vinegar on epigastrium; and every two hours a spoonful of antiseptic potion.

August 31.—Pulse good; skin warm; less agitation; the tongue is rough and high-colored in its extremity and edges; has had some repose; lemonade without restriction; antiseptic; two half-cups of cold broth, and stop the vinegar bandages.

Night.—Slow pulse, vomiting; stop the antiseptic potion, and substitute the Riverio's anti-emetic, adding a blister on the epigastrium.

September 1.—The pulse is very weak; the skin rather dry and quite pale; regular passes of water; no uneasiness; there has been a lingual-gingival hemorrhage, which has been stopped this evening; has taken during the day two half-cups of cold broth and wine; sulphureous lemonade; alum lotion, and enema of Peruvian bark in the morning and evening.

September 2.—Great prostration; the tongue is red and rough, and has had the hemorrhage repeated; has some repose; the skin is warm and dry, and greatly discolored; scarcity of urine; stop the sulphureous lemonade; antiseptic potion every two hours, and alternately the potion of perchloride of iron; enema of Peruvian bark; a half-cup of cold broth; lotions in the mouth with the alum and water.

September 3.—Some dark-colored vomiting; the gums and tongue are still bleeding; breathing very slow; scarcity of urine; pulse very poor, and skin cool and dry; portion of perchloride of iron with antiseptic decoction every hour, a spoonful of each; enema of Peruvian bark, and two cups of broth; the blister on the epigastrium to be cured with the ointment of morphine; blisters on the lower extremities.

September 4.—Great dismay; slow pulse; bleeding and slothful tongue; no vomiting; difficult breathing, and no urine; the skin is cold and of a cadaverous paleness; enema of Peruvian bark and camphor; for internal use, Peruvian bark and perchloride of iron; two cups of cold broth; cure of the liver blisters.

Evening.—In worse condition, pulse filiform; skin cold and cadaverous; difficult breathing; characteristic and very copious vomits; no urine; convulsive trembling; same medication; æther in a high dosis.

Night.—Same condition; continue the prescribed medication.

September 5.—Died in asphyxic agony.

ATAXIC—ADYNAMIC.—DECEASED.

August 29.—Pedro Cardona, a sailor of the second class, and cook, 29 years old, of a bilious temperament and a good constitution, lately arrived at the Antilles; he took an emetic on board the *Numancia*, and on entering this infirmary, he says that he is well, and that he wants to eat: has no fever and sleeps quietly; he is under the depressing action of the emetic; efforts will be made to increase the perspiration with sudorifics, and he will take sugared water as often as he wants.

Night.—With the reaction the fever reappeared; the stomach is much excited, which is shown by continued nausea; the tongue is well; no pain disturbs him; a solution of lardonized gum ointment of belladonna on the epigastrium; mineral lemonade as often as wanted; the patient says that the present vomit has been caused by his drinking little water when he took the vomitive.

August 30.—Was insomnious last night; the nervous vomiting continues, with stools of gastric juices, there is no fever, nor any symptom that may attract attention; the tongue is slightly sabulous; Riverio's potion; infusion of lind flowers with belladonna; continue the frictions with ointment of belladonna on the epigastrium.

August 31.—The vomits are persistent, though from time to time the patient says that he slept something during the night; the tongue is sharp-pointed, rough and white; no fever; the heat of the skin is normal; Riverio's potion; one-fifth of a grain of acetate of morphine every four hours; a revulsive of mustard on the epigastrium; stop the belladonna ointment.

September 1.—No fever, and the pulse is going down more and more; the general condition of the patient is unsatisfactory; a rough tongue; dryness in the skin and some uneasiness with remarkable paleness; water passes; vomiting has been entirely stopped; antiseptic decoction every two hours; warm aromatic infusion with mellis three times; sugared water as often as wanted.

September 2.—Slow pulse; skin dry and warm; insomnia; rough tongue; urine; vomiting altogether stopped; antiseptic decoction; two half-cups of broth; sulphureous lemonade.

September 3.—Great prostration; skin cool and dry; extreme paleness; agitation; anxious breathing; injected eyes; hemorrhagic tongue; tendency to vomiting; made water yesterday; his urine contains a large quantity of albumen; antiseptic decoction and perchloride of iron simultaneously; enema of Peruvian bark and camphor, double; a blister on the epigastrium; two half-cups of cold broth.

August 4.—Very even pulse; a bleeding tongue; coffee-like vomiting; hiccough; sighing respiration; Peruvian bark internally both ways; perchloride of iron; anti-spasmodic; cure the blister in the epigastrium with the morphine ointment; blisters on the lower extremities.

Night.—Same condition; periodical convulsions; delirium; same medication. He died during the violent shaking of a convulsion.

COMPLETE CASE (ATAXIC FORM).—DECEASED.

Sept. 3.—Manuel Rodriguez, a fireman, of good temperament and constitution, has to-day entered the lazaretto, having felt unwell for some days, in consequence, as he says, of the cold weather. From the 1st inst. he was medicated on board of the *Numancia*, and to-day he presents himself with a pulse rendering 60 pulsations; the skin pale, dry, and warm; agitation; pains in his waist, and also in the epigastrium when touched; the tongue is erysipelatous, the gums commencing bleeding, and hardly makes water; nervous vomiting; Riverio's potion; sulphureous lemonade and blister on the epigastrium.

Sept. 4.—The vomits have been stopped; gangrenous lingual hemorrhage; slept but little last night; slow pulse, bilious, languishing; antiseptic every two hours; sulphureous lemonade; stop the Riverio's potion; two half-cups of cold broth.

Sept. 5.—Bad appearance; bilious suffusion; the pulse is small and regularly rythmical and quick; agitation; anxious breathing; the tongue is sharp-pointed and shrivelled, and does not bleed; no vomiting; scarce urine. Stop the sulphureous lemonade; antiseptic decoction; sugared water aromatized with alcohol of mélise; antispasmodic potion; two cups of cold broth; enema of sulphate of quinine ʒi.; simple cure of the blister on the epigastrium.

Sept. 6.—Uneasiness during the whole night; hiccough; delirium; copious bloody stools; makes no water; pulse very weak; in the morning he had an enema of sulphate of quinine, one scruple; at noon he will have another of perchloride of iron; for interval use antiseptic potion of Peruvian bark and catechu; antispasmodic and blisters on the lower extremities.

Night.—Same condition, with the addition of a mucous stertor; same medicative method.

Sept. 7.—Died at 3 o'clock in the morning, of asphyxia.

Remarks.—The above are presented from the clinical reports of over forty cases, as typical of the course and treatment of the different varieties of the fever. They present an interesting study, and I venture to make from them and the preceding history the following deductions:—

First.—The *Numancia* may be styled an "infected ship." By this is meant that the specific germs of yellow fever have made a lodgement in some portions of the vessel, and whenever she is in a climate where the conditions of heat and moisture are favorable to the development of the germs, yellow fever will show itself among those on board, even though no case of the disease may exist at the time in the vicinity. This was shown in her case, for the disease had appeared during the past three years whenever the above conditions were manifested. This is by no means an unusual circumstance, particularly in vessels of war. The accumulation of dirt, oil, and extraneous matters which gradually gather between the sides and skin of the ship, and settle to the bilge, constitute a favorite nidus for the fostering of the germs. My friend Dr. Bell, of Brooklyn, has told me that during his experience in the Navy he was cognizant of several similar instances, and the Department was obliged to keep these vessels cruising in temperate latitudes. A condition like the above is not as apt to occur in the merchant marine, for then the removal of cargo and the changing of ballast enables a more thorough renovation than can be made upon a vessel of war.

In the case of the *Numancia* the epidemic would have been more speedily suppressed could we have taken, as is done in the case of a merchantman, every one from the ship, and by removal of cargo reach the bilge; but in a vessel of war, the discipline of the service, the enormous armament, and the complicated arrangement of decks, preclude such action.

Second.—The specific character of yellow fever. I am aware this topic has been again and again argued, and yet it is necessary to entertain fixed views upon the subject in order to maintain an intelligent quarantine. I think that any one who has studied carefully any of the marked epidemics of the disease, particularly where it has been transmitted to distant ports in the temperate zone, cannot but assent to its specific character. The careful narration of the epidemic at St. Nazaire, upon the western coast of France, where it was carried by a barque from Havana, the manner of its spreading, the period of incubation, all go to show as much a specific germ as that admitted in small-pox scarlatina, typhus, etc.

There are those among us who do not assent to this statement, and only in the September number of the New York *Medical Journal*, I have read a very elaborate and interesting paper by Dr. E. A. Anderson, of Wilmington, N. C., to prove the local origin of yellow fever. That the disease may have existed at Wilmington at that time, I cannot deny; but the sickness which the doctor describes has so many of the phases and conditions of the "littoral" or "paludal" fever, described so often by residents of tropical climates, that I must need doubt the *diagnosis* made until more specific data are given.* The external condition arising from undrained swamps, stagnant pools, accumulated filth in the streets, the depressing effects of the war, the imperfect character of the food, the prolonged heat, and an atmosphere surcharged with moisture, all go to show a disease of paludal rather than specific origin. I am aware that many external features of both diseases are alike. In both, yellowness of the skin and black-vomit appear; both rapidly assume the adynamic form, but the period of the appearance of these symptoms in the two diseases is quite different, and arises probably from different pathological causes. In yellow fever, yellowness of the skin, except in the severe adynamic form, is rarely present in the early stages of the disease, and when it appears is co-incident with the hemorrhagic tendency; indeed, so far from being, as has been for so long assumed, connected with the biliary secretion, it has no connection whatever with it, but is probably owing to the rapid blood disintegration which is so striking a feature of the malady. The black-vomit, too, is undoubtedly owing to the same cause. In paludal fever, on the other hand, this yellowness precedes the active irruption of the disease, and is probably owing to defective bile elimination. The very fact, too, that the disease was not propagated from Wilmington, though unrestricted intercourse existed with all other portions of the State, is another reason to suppose the disease in question was paludal, and consequently local in its origin and non-infectious. We will not stop to point out at length other striking differences, such as the presence of albumen in the urine in yellow fever; the tendency to hemorrhages, and the marked difference of the action of quinine in the two diseases.

Third.—The late irruption of yellow fever into this port demonstrates its *non-contagiousness*. Yellow fever is not contagious from person to person, but is carried from point to point, by the vessel, the cargo, or any substance which can convey the fomitic germ. It may also be conveyed for limited distances by the atmosphere. It stands in this respect in striking contrast to cholera, in which the excretions carry it from person to person. The patients from the *Numancia* were at once conveyed to the West Bank Hospital; before entering, however, their clothing was entirely changed, and no clothing allowed upon the island which was brought from the ship. This has been the invariable practice since the establishment of the hospital, now four years, and yet not a case of fever has occurred upon the island, among the nurses, attendants, or family of the superintendent, nor have any precautions of isolation, so far as the above were concerned, been attempted. To do away with the possibility of any germ finding a nidus, all clothing and bedding after use are put in an hermetically closed tank, and subjected for some time to the action of superheated steam.

I am aware there was great dread and anxiety in a portion of the community fearing that the disease would spread from the *Numancia* to the neighboring shore, about a mile distant. I did not, however, share in this anxiety. True, there existed at the time external conditions of heat and moisture which would rapidly spread the contagion. The thermometer for nearly two weeks was most of the time above 90, and the atmosphere so laden with moisture, that no evaporation of the body would go on. The previous continued heat had, too, so far enervated the system that a ready reception to disease germs was offered. I think, however, there is a limit to which it can be carried by the atmosphere, and though unable to state precisely the distance, do not think it extends over half a mile. Fortunately, while the vessel lay at the first anchorage, the wind was wholly "off shore," thus effectually relieving anxiety from that quarter. I feared more the proximity of other vessels, or small boats, and directed my efforts to avert this condition.

Fourth.—As interesting in the history of the disease the following facts may be noted. Founded upon long experience, it is the usual custom of captains of vessels lying in yellow-fever ports to administer to the crews, at short intervals, active cathartics, thus averting the germs of the contagion. This was especially noticeable in the case of the *Anna Maria*, the vessel which conveyed the fever to St. Nazaire in France. The captain while at Havana had administered cathartics to all the crew save two young men, the most robust of all. These were subsequently the first attacked, and both cases were fatal. Among the patients of the *Numancia*, those subjected to early treatment exhibited the best results.

Various other suggestions might be made, but for the present we leave the subject.

Quarantine, November, 1872.

* See article, page 230.

CONJUNCTIVITIS GRANULOSA CHRONICA TREATED BY GALVANIZATION.

By C. W. TRUEHEART, M.D.,

SURGEON TO "THE EYE, THE THROAT, AND EAR DEPARTMENT" OF GALVESTON CITY HOSPITAL.

It is the object of this paper rather to call attention to the subject considered, and invite experiment at the hands of abler observers possessing better fields for observation, than to make any startling announcement of successes already achieved.

The use of electricity in the treatment of Chronic Granular Conjunctivitis was suggested to me by observing, during recent studies in the wards of the celebrated electro-therapeutist, Prof. Dr. Benedick of Vienna, its wonderful power and efficacy in producing absorption of adventitious formations in other parts of the body. I select the galvanic rather than the faradic current, because with the former greater molecular activity and "catalytic force" can be excited, and with less pain to the patient, than with the latter.

In carrying out the experiments I have been careful to select only well-marked cases, and such as had not sustained a loss of tissue by the application of strong caustics. I only regret that the number of suitable cases that have fallen under my care who would submit to the experiments have been so small.

Within the past few months three cases of this most intractable affection, subjected to the plan of treatment presently to be described, have recovered in about one-fourth the time, and without that destruction of conjunctival tissue, with its train of evils, attending the usual treatment by caustics.

In sending the current through the upper lid, the one electrode is to be placed just above the middle of the eyebrow; for the lower lid, just over the maxillo-molar articulation; the other electrode, tipped with a piece of delicate sponge or the hair out of a camel's-hair pencil, is to be brushed lightly and slowly over the diseased conjunctiva of the everted lid.

The electrodes should be kept well moistened. I believe it to be a matter of no moment as to the relative positions of the negative and positive poles. The strength of the current used is to be regulated by the patient's sensations of pain, rather than by the galvanometer or the number of elements used.

The application at each sitting should be continued for from ten to thirty minutes, according as the patient can bear it. For the first few sittings, especially where the patient is very sensitive, only a weak current should be used, and the electrodes applied to the integument of the closed lids just over either canthus. Indeed, I think it will in most cases be found best to apply the electrodes to the closed lids for the latter part of every sitting, as the application to the everted lids becomes quite painful if continued for more than ten or twelve minutes. Three to five sittings, on consecutive days, will usually serve to excite a sufficiently active inflammatory reaction to set in motion the absorption of diseased materials. A pretty vigorous reaction having been induced, the sitting should be discontinued for three to six or eight days, when, the artificial inflammation having subsided, the sittings are again to be resumed as before. Pencilling the conjunctiva daily with a 2 gr. sol. of arg. nit. in the intermissions of the use of the electricity seemed to act very well.

The shrinkage of the hypertrophied papillæ and the infiltrated subconjunctival tissue, following each series of sittings, was very marked. In one very severe case of near two years' standing, where the thickening of the lids was such as to insure decided ptosis of both eyes, eight sittings within a period of twenty days caused an improvement of fifty to seventy-five per cent.

A FEW UNUSUAL CASES MET WITH IN EAR PRACTICE.

By ALBERT H. BUCK, M.D,

ASSISTANT AURAL SURGEON TO THE N. Y. EYE AND EAR INFIRMARY.

Most of the following cases merit the name of curiosities only in so far as they present certain features which are not often encountered by the aurist. They involve no new points in the pathology or treatment of ear diseases, and deserve to be placed on record only on account of their comparatively unique character. One or two of them at most have practical bearings upon the question of treatment.

Gunshot wound in the ear. Removal of the ball after a lapse of nearly ten years.—Sylvester Bennett, age 34, was admitted to the N. Y. Eye and Ear Infirmary, June 12, 1872. He gave the following history of his case: In the course of an engagement with the enemy in Val Verde, New Mexico, on the 22d of February, 1862, the company of which he was a member (Co. G, 1st U. S. Cavalry) was ordered to retake a battery. While they were advancing he was shot in the right side of the head, the ball entering the skin just in front of the ear. The shot had come from the detachment of the enemy in the rear. Three days later the ball was extracted from above the right eye-brow. He then noticed a sensation of throbbing and fulness in the right ear, accompanied soon after by a discharge. He remembered also that one of his comrades about the same time removed a bunch of hair, clotted with blood, from the right ear. During the first ten or twelve months following the accident, he frequently found small fragments of bone in the discharge. Six months previous to his visit to the Infirmary he had experienced a severe attack of pain in the right ear, but before that time he had always been comparatively free from pain. From the very first he had been annoyed by a tinnitus, like the roaring of a shell. All sounds, moreover, seemed to reach him by way of the left ear. At night he had always been obliged to sleep on the right side, for whenever he attempted to lie on the left side the sense of weight in the right ear became unbearable. About a week previous to his visit to the Infirmary the parts about the right meatus became very painful and swollen. The swelling subsided in the course of a day or two, and then for the first time he detected the presence of some hard substance filling the outer canal. He applied to the Infirmary for relief, and on examination I found a black mass partly covered by pus and blocking up the entrance to the right external auditory canal. It was very easily removed with the forceps, and proved to be a very much corroded, oblong leaden bullet, a little over half an inch in length, and three-eighths of an inch in breadth. The deeper portion of the meatus was found to be filled with a mass of granulations. No sinus could be found, nor any exposed bony surface. The Eustachian tube open. In front of the tragus there was a depressed scar indicating the point where the second ball had entered. Watch not heard at all. The sound of a tuning-fork, placed on the centre of the forehead, was referred by the patient to that point and not to either ear. With the left ear tightly closed he could understand ordinary conversation with the right ear at a distance of four or five feet.

On the 15th of June, the patient reported that he had experienced entire freedom from pain after the removal of the ball. The discharge had stopped very soon after the last visit. On the 24th of July he again visited the Infirmary. The discharge had not returned. The roaring still continued unchanged, but the sense of weight had disappeared, and he was able to lie indifferently on either side. Cicatrization had taken place in the ulcerated portion of the meatus, and there was then a clear but funnel-shaped passage down to the cavity of the tympanum. No trace of ossicles or membrana tympani visible.

Shortly after the accident, and even up to the time of his visit to the Infirmary, the patient supposed that his ear trouble had been caused by the glancing off backwards of a fragment of the ball which struck him in front of the ear. Even the removal of a tuft of hair from the external auditory canal had not suggested to him the idea of a second ball, until after I had shown him that the leaden mass removed from the meatus could scarcely have been a fragment of the ball that had been extracted from above the eye-brow of the same side. He then stated to me that many of the men in the enemy's ranks were armed with double-barrelled fowling-pieces, and suggested the possibility of his having been shot by the simultaneous discharge of both barrels of such a weapon. A more natural supposition is that he was shot by a cartridge containing two or more bullets.

Extravasation of blood into the tissues of the membrana tympani, produced by inflation of the middle ear according to Politzer's method, and resulting in a perforation of the membrane.

On the 10th of January, 1871, Mr. H., æt. circa 40,

consulted me in regard to an otorrhœa which dated as far back as his boyhood. On examination I found the left middle ear the seat of a chronic purulent inflammation, with a perforated tendinous membrana tympani. Both Eustachian tubes were open to inflation by Politzer's method. Naso-pharyngeal mucous membrane covered with an abundant secretion of tough mucus. On the right side the membrana tympani was entire, though mottled in appearance and somewhat sunken. In ordinary conversation there was no appreciable deafness. Hearing distance for the watch, 15 inches on the right side, contact on the left. After inflation according to Politzer's method, the hearing distance rose to two feet on the right side. The patient having called my attention to the fact that he was a sufferer from heart disease, I made a superficial examination and found the precordial region prominent and pulsating. I could detect no thrill, but on auscultation heard a loud blowing murmur.

In the following November, ten months later, the patient visited me again. He reported that during the previous few days he had been troubled with decided dulness of hearing. I examined the right ear, and found the membrana tympani quite sunken. To restore the pressure upon the opposite sides of the membrane to a state of equilibrium, I inflated the middle ear according to Politzer's method, using about the ordinary degree of force in compressing the air in the bag. Immediately afterwards the patient complained of pain in that ear, and inspection revealed the fact that an extravasation of blood had taken place between the layers of the membrana tympani. The lower half of the membrane was of a uniform bright red appearance. The upper outline of the red region was pretty sharply defined, though somewhat irregular, showing that the blood was within the substance of the membrane and not free in the cavity of the tympanum. The pain passed off entirely in two or three minutes.

On the 17th of November, I found that the region of extravasation had become very much reduced in size. Just beneath the tip of the manubrium there was an oval, not very sharply outlined, dull purple spot, measuring about three millimetres in its greatest diameter. As there was a considerable accumulation of cerumen in the right meatus, which was likely soon to fill the passage, I injected with moderate force a large syringeful of lukewarm water into the canal. At the same moment the patient exclaimed that the water was escaping from his nostril, and for a few minutes he suffered from a sharp pain in the right ear. After this unfortunate occurrence, the patient felt unwilling to continue under treatment and I lost sight of him.

Similar accidents from the inflation of the middle ear have been recorded.* but they are very rare. In the present case I think the rupture of blood-vessels may be explained in the following manner. The immediate effect of inflation by Politzer's method is a sudden and uniform pressure upon the walls of the tympanic cavity, and consequently upon the blood-vessels which are distributed throughout its mucous membrane and the membrana tympani. This pressure may be sufficient to stop the returning venous circulation, and so cause a congestion of the capillary and arterial systems. An inspection of the membrana tympani after a successful inflation of the middle ear, almost invariably reveals an arterial congestion of its peripheral and manubrial portions. If we take into consideration that in the present case the strain came upon vessels which in all probability were diseased—as may be inferred from the existence of an aneurism—we can easily understand how the inflation produced a rupture of some of the minute vessels of the membrana tympani. Throughout the greater part of the region where the extravasation occurred the extravasated blood soon became absorbed and the circulation re-established; in one portion, however, as it would seem, the circulation was not restored and the part consequently died. The connections, moreover, between this dead portion and the surrounding healthy membrane were not strong enough to resist the force of the injected column of water, so that a portion of it made its escape through the Eustachian tube into the nostril.

Hook-shaped manubrium mallei.

James Doyle, æt. 13, was admitted to the N. Y. Eye and Ear Infirmary May 15th, 1872. When three years old he had an attack of scarlet fever which left him with a double otorrhœa. On the right side the discharge had continued ever since; on the left it had entirely ceased about a year previous to his visit to the Infirmary. The only point of interest in the case was the existence of an unciform manubrium mallei on the left side. The accompanying wood-cut gives a correct idea of the peculiar manner in which the tip of the manubrium is bent round upon itself in the plane of the membrana tympani. The membrane itself was mottled and opaque in appearance; it was entire and not appreciably sunken. On the opposite side the manubrium and membrana tympani had been entirely destroyed, so that it was no longer possible to institute a comparison between the two sides. The boy was robust in health, notwithstanding his protracted otorrhœa, and presented no signs of ever having had rickets. The curve being in the plane of the membrana tympani, and in the direction from behind forwards, we could scarcely attribute the malformation to processes of an inflammatory nature or to a force acting from without inwards, like that which prevails during a prolonged closure of the Eustachian tube.

Arterial hemorrhage from the ear after the removal of a polypoid growth.

William Riley, æt. 33, a conductor on the 3d Av R. R., was admitted to the N. Y. Eye and Ear Infirmary on the 28th of February, 1872. He stated that since the age of fourteen he had suffered from a constant discharge from the left ear; that six years before he consulted a physician in regard to it and was told that it would be necessary to remove a polypus from the ear before the discharge could be stopped. He refused, however, to submit to the operation and allowed the discharge to continue unchecked. At the time of his visit to the Infirmary the left meatus was found to be filled with a moderately firm, fleshy mass. With Blake's modification of Wilde's snare I was able to encircle the polypus near its base and thus extract it entire. Following the operation there was a pretty active hemorrhage of a bright arterial hue. By soaking up the blood with a large pledget of cotton batting I was able to obtain a momentary view of the spot from which the arterial hemorrhage came, but was unable to make any applications directly to the bleeding vessel. Plugging the meatus tightly with cotton batting seemed for a time to control the bleeding, but the blood soon began to escape from the edges of the plug. After an hour of fruitless efforts to stop it the hemorrhage appeared to

* Gottstein (*Archiv für Ohrenheilkunde*, Bd. iv., p. 71) relates a similar accident, following the injection of a weak solution of sulphate of zinc into the middle ear. The injection was effected by dropping a few drops of the solution into the catheter and then forcibly inflating the tympanum through the instrument. Here it was evidently the inflation and not the solution that produced the extravasation.

be as active as at the first, and was checked at last by plugging the meatus with bits of sponge saturated with the undiluted liquor ferri subsulphatis.

On the following day I removed the impacted masses of sponge and coagulated blood. The patient had been free from pain since the operation and there had been no return of the bleeding. On examination I found that just beyond the broad stump of the polypus, which sprang from the upper and posterior portion of the meatus, a little beyond the junction of the cartilaginous with the osseous portion, the curved probe entered a bony sinus leading upwards and backwards into the mastoid cells. Two other smaller growths sprang from the anterior wall of the meatus immediately opposite the base of the larger polypus. These were cut off at their roots with Blake's snare, after which the remaining stumps of all three growths were freely cauterized with crystals of chromic acid. The subsequent treatment of the case consisted in frequent cauterizations, which were repeated until the calibre of the canal at the point of constriction was enlarged to about 4 millim. in diameter. By the 13th of May I found the process of cicatrization completed. The discharge had already ceased some weeks previously.*

Interlamellar Cyst of the Membrana Tympani.

Amelia Johnson, aged 18, was admitted to the N. Y. Eye and Ear Infirmary, August 23, 1871. She was suffering at the time from a chronic eczema of both auricles, the trouble being chiefly in and about the external auditory canals. In addition to this there was on the right side a purulent inflammation of the middle ear of long standing, and associated with extensive destruction of the membrana tympani. On the left side there was simply a myringitis, characterized by redness and swelling without perforation. The eczema yielded satisfactorily to applications of the oil of cade, but several relapses occurred during the subsequent six months. On the 19th of June, of the present year, she again visited the Infirmary. Her story was, that about two weeks previously she began to grow somewhat deaf in the left ear, and to suffer from a dull, unpleasant sensation amounting almost to pain. There had been no tinnitus and no discharge. On inspection the following condition of things was observed in the left ear: In the upper and anterior portion of the field the short process and a part of the handle of the hammer were visible. The greater part of the anterior superior quadrant of the membrana tympani was also in situ, and appeared to be nearly normal, being neither sunken nor too prominent. Posteriorly and inferiorly these parts were limited by the curved outline of what seemed to be a cyst of the membrana tympani. The shape of this cyst was somewhat flask-shaped, the broad neck arising gradually from the posterior fold of Shrapnell's membrane, and the body expanding below to such an extent as to conceal the lower portion of the manubrium mallei, and the anterior inferior quadrant of the membrane. Near the neck of the cyst there was some redness of the skin, but the main portion of the cyst was of a dark, greenish hue. Touching this body with the end of the probe, I could see it yield as if its contents were fluid. During inflation of the tympanum no motion or change could be detected in the cyst. The air entered the middle ear freely, and without râles. An incision carried vertically through the outer wall of the cyst exposed to view a muco-purulent mass, filling the cavity. Inflation of the tympanum was then resorted to, but it failed to exert any influence upon the contents of the cyst; the air, as before, still entered the tympanum freely, and without râles or perforation sound. By making pressure with the bent end of a probe, the contents of the cyst were perfectly evacuated. A few days afterwards I again saw the patient. The pain had then disappeared, and hearing had improved. Inspection showed that the incision had healed, but that there was still considerable thickening of the entire posterior half of the membrane. The patient then passed from under my observation.

From the shape of this cyst it seems probable that at the commencement there was an abscess of the subcutaneous tissue immediately covering Shrapnell's membrane; that this abscess extended itself in the direction of the least resistance, taking its course between the dermoid layer and substantia propria of the membrana tympani, until it reached the lower border of the membrane. It is quite likely that the cyst increased in size after leaving its original situation, and that its contents underwent mucoid degeneration. The auscultatory signs before and after the evacuation of the cyst were such as to leave no doubts as to the absence of any communication between it and the tympanic cavity.

No. 50 East Thirty-first Street.

* Dr. C. A. Robertson, of Albany (*Trans. of the Amer. Otol. Society*, July, 1870), has reported a case of malignant disease of the ear, where the hemorrhage was very profuse after the operation, but it is not stated whether the hemorrhage came from a single arterial branch, as in the present case, or from a number of divided vessels.

Reports of Hospitals.

ST. VINCENT'S HOSPITAL.—SKIN GRAFTING.

By M. DONNELLY, M.D.,
LATE HOUSE SURGEON.

Although much has been written upon the subject of "Skin Grafting," the valuable improvement which this process institutes in the treatment of ulcers and other lesions of the skin, does not seem to have been as yet fully appreciated by the profession; the operation is seldom attempted in private practice, and rarely investigated outside the walls of a hospital. But any one familiar with the old-time method of treating varicose ulcers and extensive burns, by salves, lotions, and caustics, with the consequent filthy discharges, the vexatious and long continued treatment for months, and even years, cannot but indulge a feeling of relief to know that he lives in the days of carbolic acid and skin-grafting.

Through the kindness of the visiting surgeons of St. Vincent's Hospital, Drs. Finnell, Kerrigan and Phelps, I have been enabled to investigate this valuable acquisition to surgery, and I purpose to detail a few cases, with the results attained, claiming to add but little to what is already known upon the subject.

The consent of the patient is the first thing to be secured, but it is generally given when the advantages of this mode of treatment are properly represented, these being—1st, the rapidity of cure over the older methods, counting by weeks instead of months, or even years;—2d, the elasticity and strength of the new skin;—3d, the absence of contraction and deformity usual in ordinary cicatricial tissue;—4th, the less liability to recurrence of the ulcer; added to these is the almost painlessness of the operation, patients rarely complaining during the cutting, and should a second grafting be required they will often urge the operation.

Having the desired consent, two important elements of cure are still wanting, viz., absolute rest and healthy granulations in the ulcer, both conditions being imperatively necessary to success. No horticulturist would attempt grafting on an unhealthy stem, so it becomes necessary to rouse the ulcer to a healthy condition by poultices, carbolic acid, and moderate local stimulation by caustics.

When the granulations have assumed a healthy appearance the grafting is done, and the mode of procedure which I have found most simple and successful is,—to grasp a portion of the skin of the arm by a forceps, and with a scissors snip out an elliptical piece about half an inch long by three-eighths of an inch wide: this piece of integument is divided into fragments one-quarter of an inch square, not smaller, and laid on the granulations; over them, common adhesive straps are applied, and outside a roller is evenly adjusted.

The edges of the small wound on the arm are drawn together by a couple of sutures and adhesive straps outside, this healing in from three to ten days. Should the ulcer be small, two or three grafts a quarter inch square may be taken from separate places on the arm, this method having the advantage of allowing the arm to heal sooner, but when there is a large ulcer or extensive burn, then a large piece is more convenient. The dressing may be removed on the second or third day; the grafts will then have become adherent, not disappearing as when smaller grafts are used; the epithelial layer will be found loose and dead, and can easily be removed for microscopic examination if required. The ulcer will be found to have taken on a new and more vigorous life, looking healthier already; the edges will have commenced closing in under the stimulus given by the grafts, making more growth in one day than the older methods in a week.

The after treatment consists in occasional appplications of nitrate of silver to the edges; adhesive straps should be firmly applied, and outside of them a roller may be folded, to be dressed every second day.

Should the ulcer be large, the grafting may be repeated in fifteen or twenty days, placing the grafts about one inch from the edges, as growth only occurs from the circumference toward the centre, the grafts making but little advancement.

The size of the grafts is an important point. I have found a quarter of an inch square to be more successful than smaller pieces, as the latter slough away and do not reappear, as has been said of them by some writers. I am convinced that one cause of failure is the smallness of the grafts.

The point generally recommended from which to take the integument is the inside of the arm, in front of or below the biceps;—after using the skin from the opposite thigh, the body, and various places on the arm, with equal success from all points, I have concluded that the most eligible point is the outside of the arm along the posterior border of the deltoid, the advantage being that the cut on the arm heals best in this locality, it being *a point of least motion*. The contractions of the biceps delay the healing for a much longer time when the grafts are taken from its vicinity.

Much speculation has been indulged in as to which particular histological element of the skin is concerned in the growth of these grafts, the generally accepted theory being that the epidermic layer alone is the life-giving element; my observations have led me to doubt the correctness of this theory, notwithstanding that nearly all investigators, and among them the eminent originator of skin grafting, Professor Frank Hamilton, adopt this theory.

Virchow asserts * "the epidermis to be in itself an inert mass which is gradually removed from the surface," and having seen this layer slough away from the grafts while the true skin is growing, besides having grafted the epithelial layer alone and failed completely, the obvious conclusion I arrived at was that the cuticle furnishes none of the elements of cell growth; and that to the connective tissue cells of the true skin alone is due the growth of cell structure and formation of cicatricial tissue. Dr. Howard's † investigations in "Muscle grafting" go far to disprove the epithelial theory, and show that muscular tissue devoid of epithelial cells grew fully as well and as rapidly as integument when grafted on old ulcers. It is well known that muscular fibrillæ form no part of cicatricial tissue, and the only remaining cell structure capable of growth is the connective tissue cells.

Were I allowed the indulgence of theorizing on this subject, I would say that probably every part of the true skin, except the nerves, has to do with their growth. Circulation is probably established immediately by capillary attraction from the vascular granulations, the future elements of growth being the connective tissue cells.

I now submit the cases, all of which, except the first, occurred in St. Vincent's Hospital.

Case I.—Olof Thostenson, æt. 22, laborer, Norway, living in Lanesbow, Minnesota. On January 6th, 1870, had his left thigh crushed by a falling bank of clay; a slough formed and separated, leaving an ulcer fourteen inches long, twelve inches wide, and one inch deep; was then dressed with carbolic oil; he lived through two attacks of erysipelas, was under my care for two months, was then transferred to the county poor-house; he returned to me after eight months' residence there, with an indolent ulcer still open on the injured thigh, three and a half inches in diameter, which I treated by every possible means except grafting, for seven months, without effecting a cure; I repeatedly advised grafting, but could only get permission to use the cuticle (I was not to draw blood), but this failed also, when he finally consented; the ulcer healed in one month after grafting, although he worked eight hours every day during that time.

Case II.—John Hennessy, æt. 29, engineer.—Was admitted into St. Vincent's Hospital on November 28th, 1871, with an indolent ulcer on the front of the left leg, of six months' standing, measuring three by three and a half inches; treated by poultice till December 22d, when it was grafted by six pieces, each a quarter inch square. December 30th, five grafts have taken; the ulcer shows signs of rapid growth from the edges already. January 12th, the ulcer is healed with strong skin in twenty-two days from time of grafting. Three months subsequently he reported favorably by calling at the hospital.

Case III.—Ellen Wilton, æt. 28, laundress, Ireland, admitted December 28th, 1871, with an irritable varicose ulcer of four years' standing, size three and a half by two inches. Poultice applied and tonics administered. January 17th, '72, grafting was done to-day; six grafts were placed on the ulcer. January 21st, the entire six grafts are found adherent, and the ulcer is closing in by centripetal growth. February 3d, the ulcer is healed in seventeen days from date of grafting.

Case IV.—Mary Lyons, æt. 30, domestic, Ireland. Admitted April 27th, with a varicose ulcer of three months' standing, size four and a half inches by three and a half inches. Respective poultice with carbolic

* Virchow's "Pathology," page 61.
† *New York Med. Journal*, September, 1871.

acid applied, and tonics internally. May 10th, grafted the ulcer to-day by four pieces. May 12th, the four grafts are all growing; already the edges show evidence of a higher and more active form of vitality. June 9th, the ulcer is fully healed in four weeks, from date of grafting; the growth has been so rapid in this case, principally from the circumference, that the grafts have retained the character of integument; even the cuticle is intact, but not sensitive to the touch.

Case V.—Patrick Tully, æt. 48, porter, Ireland, admitted March 11th, 1872, with a circular slough over the internal malleolus of right foot, three inches in diameter. This foot is deformed by an unreduced dislocation, the internal malleolus projecting; upon it ulcers have formed at various times. April 10th, the ulcer being healthy, grafting was done to-day. April 13th, grafts all growing, ulcer improving. May 1st, the ulcer is completely healed, three weeks after grafting. The patient states that previous ulcers of the same size in this locality took over three months to heal under favorable treatment.

Case VI.—Mary Ryan, æt. 80, Ireland, admitted May 22, 1872, with contused wounds of right leg and right arm; in a sloughing condition. Warm poultice applied. June 5th, the ulcer on leg is five and a half inches long by two inches wide; grafting done to-day. June 7th, the grafts are all growing; the cuticle and superficial portion of the true skin of the grafts have sloughed away. July 3d, the ulcers on both leg and arm have healed in twenty-eight days from time of grafting, though the patient's age and condition would not warrant anticipation of such good results.

Case VII.—John Cullen, æt. 29, laborer, Ireland, admitted March 9, 1872, with an extensive burn of left thigh and natis, caused by falling into a burning lime-kiln about one week previous to admission. Size of burn was fifteen inches long, ten inches wide at the buttock, and five inches wide at the knee. A warm poultice of charcoal, bran and carbolic acid was applied. April 5th, the slough having separated, the ulcer filled up level with the surrounding skin; was grafted to-day by placing the grafts about one inch from the edges of the ulcer. April 8th, one-third only of the grafts are growing, owing to the flabby granulations and absence of pressure on the grafts; one piece over the trochanter major, where firm pressure could be made, spread nearly an inch square. April 18th, the ulcer now twelve inches by four inches; a new set of grafts were placed as before near the edges. May 1st, the previous grafting was quite successful; all the pieces taking; grafted again to-day. June 3d, since last record the ulcer has been healing rapidly;—size now, nine by three inches; grafting repeated to-day. July 1st, the last grafting was followed by excellent results; grafting done again to-day. July 15th, the ulcer has closed in by bridges of new skin across the ulcer in several places. July 22d, but three small places now remain unhealed; these were grafted to-day. August 9th, the entire wound has healed; the patient sitting up to-day, five months from date of admission, and four months from commencement of grafting, thus hastening the cure, according to good authorities who have seen the case, by at least twelve months.

A short summary of the principal points may not be out of place. I. Rapidity of cure over other methods. II. The elasticity and strength of the new skin over ordinary cicatrices. III. Absence of contraction and deformity. IV. The simplicity of the operation and its freedom from pain. V. Necessities: absolute rest, and healthy granulations. VI. Size of grafts: a quarter of an inch square; smaller almost useless, larger ones unnecessary. VII. The outside of the arm the best place to take the integument from. VIII. In large ulcers the graft to be placed one inch from the edges; the operation repeated as often as required. IX. The full depth of the *true skin* necessary, as growth of grafts is due to the derma, and not to the epidermis.

Progress of Medical Science.

A Sure Test as to whether Life is Extinct or not.—A few years since a price was offered by the Paris Academy of Science for a sure and easily-applied test of the presence of death. In answer to this, Dr. Hugo Magnus, of Breslau, contributes a paper on this subject to Virchow's *Archives*. Dr. Magnus directs his attention to the vegetative phenomena, since among these may be found those peculiar to functions which will bear being reduced to a minimum, but upon the stoppage of which death follows at once. Now there are two systems the functions of which are never completely suspended during life, *viz.:* the circulatory and respiratory. Choosing the former of these, Dr. Magnus resorts to a very simple method, which is thus described:—

"If a limb of the body—a finger is best for the purpose—be constricted by a strong ligature quite tightly, there will be seen, if the subject be yet alive, a reddening of the constricted member. First, the part in question becomes red, and the red color becomes darker and darker, and deeper in hue, till it is finally converted into a bluish-red, the whole limb being, from its tip to the ligature which encircles it, of a uniform color, except that at the region immediately around the ligature itself there is to be seen a narrow ring, which is not bluish-red, but white." On those whose skins are thickened and hard from work it may be necessary to choose some other part than a finger, as, for example, a toe or the tips of the ear. This evidence is as sure to be brought about in the living body as it is certain to be absent in the corpse. The bluish coloration of the finger-tips, so often observed in the dead body, need not be regarded as a source of fallacy, for after ligation of a finger, as long as life is present, the whole limb, from the point of ligation to the extremity, will be uniformly blue-red. Large limbs, on account of offering facilities for the flow of the venous blood through the deeper veins, do not serve as well as the small extremities, in which the tissues are more easily compressed against bone.

Varicose Veins.—In a paper read before the Central Kentucky Medical Association, by A. D. Price, M.D. (*Richmond and Louisville Medical Journal*, August, 1872), two obstinate cases of varicose veins successfully treated with injections of persulphate of iron were detailed. The author remarked that this method has at least three advantages over all others: that it is easily performed and need give but little pain; and that the only instrument necessary is an ordinary hypodermic syringe.

Changing the Direction of Wild Hairs.—A new method of changing the direction of wild hairs, which turn in upon the ball of the eye, is recorded by Julian J. Chisholm, M.D., Professor of Eye and Ear Diseases, University of Maryland, in the August number of the *Richmond and Louisville Medical Journal*. The rationale of the operation is that the hair drawn through the lid will, by constant traction in growth, change the position of its hair-bulb, and in this way correct the wild direction which it formerly took, to the serious injury of the patient.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

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CLOSE OF VOLUME VII.

The present number closes Vol. VII. It is, perhaps, superfluous on our part to say that we have striven to the best of our ability to make the Record acceptable to its readers. That we have succeeded, at least in a measure, in so doing, is proved by the very substantial encouragement we have received from our contributors and subscribers. Our success in these particulars is not only an indorsement of honest endeavor, but speaks well for American medical journalism. There was a time when all enterprises of this sort were sneered at and discouraged by many of the first men of the country. The few unsuccessful and puerile efforts to establish journals were taken as indices of certain failure to others. Now, however, medical journalism has vindicated for itself not only a cordial recognition for usefulness, but is considered as one of the most necessary elements of medical progress. Both contributors and readers are now ready to indorse this statement. The former, who not many years ago could be numbered by the score, now count by hundreds; and instead of the editor soliciting articles,—in fact, actually begging for them to fill his space,—the communications from the highest sources now crowd with such importunity, that the necessary delays in their appearance can scarcely be excused for actual want of room for them.

The progressive medical man has discovered that the medical journal is the best possible channel to a reputation, and he is not slow to use it. We are pleased to see that this recognition of good services rendered to science is not confined to the readers of any particular periodical, but that they are quoted far and wide by our exchanges all over the world. We speak from actual knowledge when we say that contributions to the columns of the Record have thus found their way into every medical journal in the world. Many have been translated entire into French, German, Spanish, Dutch, Norwegian, and Italian. This is a very flattering acknowledgment of the value of the articles, as well as it is encouraging for investigators to continue in their work. The good thus accomplished is of a double character; blessing the giver as well as the receiver—making a reputation of the contributor as well as a reputation for the journal.

Another element of the success of a journal, which we have a very direct way of proving in our own experience, is the thorough spirit of independence with which it may be managed. By the adoption of such a course we cannot expect to please every one, nor should any journalist care to do it when plain words have to be spoken against abuses, and candid opinion given in favor of strict justice and simple truth. When there is a strict adherence to such principles by journals, their opinions will command a weight which the dictates of no party spirit, however strong, can give them, and will, in default of everything else, be at least respected for good intentions.

In closing up our labors for the year, and while congratulating ourselves on the success which has crowned our efforts, we are not unmindful of the valuable services rendered us by different members of our staff. Dr. John Winslow has contributed largely to the interest of the present volume by his reports of the County Medical Society, but more particularly by his admirably exhaustive résumé of the proceedings of the American Medical Association—the most elaborate report of the sort ever made in any medical journal in this or any other country. Drs. Bradford S. Thompson, F. A. Castle, and Thomas E. Satterthwaite have given us invaluable assistance in the department of Progress of Medical Science; the former gentlemen having, in addition, regularly supplied us with the reports from the Academy of Medicine. Our Review department has been enriched by many exhaustive criticisms from the gifted pens of Drs. Chamberlain, R. W. Taylor, Clymer, Beard, Burrall, Mason, Hewit, and others.

In conclusion, we would state that with the same co-laborers and with increased facilities, we shall endeavor to make the Record even more acceptable to its readers.

Reviews and Notices of Books.

A Manual of Histology. By Prof. S. Stricker, of Vienna, Austria, in co-operation with Th. Meynert, F. Von Recklinghausen, Max Schulze, W. Waldeyer, and others. Translated by Henry Power, of London; James J. Putnam and J. Orne Green, of Boston; Henry C. Eno, Thomas E. Satterthwaite, Edward C. Seguin, Lucius D. Bulkley, Edward L. Keyes, and Francis Delafield, of New York. American Translation edited by Albert H. Buck, Assistant Aural Surgeon to the New York Eye and Ear Infirmary. Wm. Wood & Co. 1872. In one large octavo volume of over 1,100 pages, beautifully printed, and illustrated with 431 superior wood engravings. Price in extra muslin, $10.00; leather, $11.00.

The following is the table of contents, with the names of the author and translator of each article:

General Methods of Investigation, by S. Stricker.

1. The General Character of Cells, by S. Stricker. 2. The Connective Tissues, by B. A. Rollett. 3. The General Characters of the Structures Composing the Nervous System, by Max Schultze. 4. The Tissue of the Organic Muscle, by J. Arnold. 5. The Mode of Termination of Nerve Fibre in Muscle, by W. Kuhne. 6. The Behavior of Muscular Fibres when Examined by Polarized Light, by E. Brucke. 7. The Heart, by F. Schweigger-Seidel. 8. The Blood-Vessels, by C. J. Eberth. 9. The Lymphatic System, by F. Von Recklinghausen. 10. The Spleen, by Wilhelm Müller. 11. The Thymus Gland, by E. Klein. 12. The Thyroid Gland, by E. Verson. 13. The Blood, by A. Rollett. 14. The Salivary Glands, by E. F. W. Pflüger. 15. Structure and Development of the Teeth, by W. Waldeyer. 16. The Intestinal Canal, by E. Klein and E. Verson. 17. Blood-Vessels of the Alimentary Canal, by C. Toldt.

All of the above are translated by Henry Power.

18. The Liver, by Ewald Hering; translated by Albert H. Buck. 19. Larynx and Trachea, by E. Verson; translated by Albert H. Buck. 20. The Lungs, by Franz Erlhard Schulze; translated by Albert H. Buck. 21. The Kidney, by C. Ludwig; translated by Albert H. Buck. 22. The Supra-Renal Capsules, by C. J. Eberth; translated by Albert H. Buck. 23. The Urinary Bladder and the Uterus, by Heinrich Obersteiner; translated by Edward L. Keyes. 24. The Testicle, by Von La Valette St. George; translated by Edward L. Keyes. 25. The Ovary and Parovarium, by W. Waldeyer; translated by Albert H. Buck. 26. Skin, Hair, and Nails, by Alfred Biesiadecki; translated by Lucius D. Bulkley. 27. The Serous Membranes, by E. Klein; translated by Albert H. Buck. 28. The Mammary Gland, by C. Langer; translated by Thomas E. Satterthwaite. 29. Male and Female External Genital Organs, by E. Klein; translated by Thomas M. Satterthwaite. 30. The Uterus, Placenta, and Fallopian Tubes, by R. Chrobak; translated by T. E. Satterthwaite. 31. The Spinal Cord, by J. Gerlach; translated by Edward C. Seguin. 32. The Brain of Mammals, by Theodore Meynert; translated by James J. Putnam. 33. The Sympathetic Nervous System, by Sigmund Mayer; translated by Edward C. Seguin. 34. The Organs of Taste, by Th. W. Engleman; translated by Albert H. Buck. 35. The Organ of Smell, by Prof. Bauchbin; translated by Francis Delafield. 36. The Organ of Vision: The Retina, by Max Schultze. Tunica Vasculosa, by A. Iwanoff. The Blood-Vessels of the Eye, by Th. Leder. The Lymphatics of the Eye, by G. Schwalbe. The Vitreous Body, by A. Iwanoff. The Lens, by Prof. Bauchbin. The Cornea, by A. Rollett. Conjunctiva and Sclerotic: The Lachrymal Gland, by Franz Boll; translated by Henry C. Eno. 37. The Organ of Hearing: The External and Middle Ear, by J. Kessel; translated by J. Orne Green. The Eustachian Tube, by Prof. Ruedinger; translated by J. Orne Green. The Membranous Labyrinth, by Prof. Ruedinger; translated by T. E. Satterthwaite. Auditory Nerve and Cochlea, by W. Waldeyer; translated by Albert H. Buck. 38. Development of the Simple Tissues, by S. Stricker; translated by Albert H. Buck. 39. Structure of Synovial Membranes, by Dr. Edward Albert; translated by T. E. Satterthwaite. On the Non-Pedunculate Hydatids, by Dr. Ernst Fleischl; translated by Dr. T. E. Satterthwaite.

The reader will obtain a far better idea of the scope of this work by examining the table of contents than in any other way. In addition to the text, there are numerous illustrations, which enable the reader to comprehend the text; the number of these is 420.

There is a want of smoothness and uniformity about the work, owing to its production by different people. Thus an unnatural predominance is given to the minute anatomy of some organs, and an equally disagreeable shortness to that of others, and the same is true with reference to the illustrations. The editor of the German edition alludes to this in his preface. As a compensation for this, we have the anatomy of many parts given to us by those who have made it the subject of thorough investigation. If we pass from the matters of fact communicated to the manner in which it is done, we find an equal diversity of style and expression; thus Von Recklinghausen and Max Schultze write in such a manner as to be easily comprehended; whilst Meynert introduces so many analogies, and so strives to inaugurate a new and visionary nomenclature, as to impair the usefulness of his very valuable article.

The translation of the work has been very creditably done, both by Power and the American translators. Here and there the German idiom has been retained, but in the first edition of a work of this kind the opposite could not have been expected.

The need of a work of this kind has been felt for some time past. The last edition of Kölliker contains points which he himself has altered in his later editions, which have not been translated. To the reader of German there is a large number of works to choose from, but to one who does not comprehend that language the choice has been restricted to Kölliker's old edition. The publication of this work is destined to give an increased zest to the study of minute anatomy; a study which is becoming a necessity to any one who desires to be a thoroughly educated physician. Nor do we believe that this study will be limited to physicians, but that hereafter in all colleges it will be thought more important for a man to understand the construction of his own body than to know a language spoken hundreds of years ago, and as important as to know the ultimate chemical ingredients of the air, water, and rocks. If physicians desire to do away with quackery both within and outside of the profession, much more can be accomplished by a thorough education of themselves, and by attempting to inaugurate the era when a knowledge of anatomy will be considered indispensable to a good education, than by the publication of reams of satire or the utterance of hundreds of philippics.

We believe this book to be indispensable to any physician who desires to understand the present position of medical science, and to know, if not to find out for himself, the present knowledge of the minute anatomy of the human body. The authors, as remarked before, are men who have devoted themselves to these studies, and do not limit themselves to communication of the facts, but in many places treat of the methods of obtaining good specimens for self-study.

As for the book itself, it has been published in good style. The type is clear, the wood-cuts are equal to those of the German edition; and there are but few typographical errors.

Correspondence.

THE ANTIQUITY OF EXCISIONS.

To The Editor of the Medical Record.

Sir:—Permit me to say, in reply to the communication of I. C. R., in your issue of December 2d, 1872,

that no one, so far as I know, has ever doubted that excisions for *traumatic* causes, and excisions of *bones* for *disease*, were practised in ancient times; and that a reference to any of the modern surgical text-books will show that this is generally acknowleged. Filkin's excision of the knee, in 1762, is, however, commonly accepted as having been the first formal, complete excision of a *joint* for *disease*, and none of I. C. R.'s quotations tend to throw any doubt upon the subject.

With regard to the substitution of the word "*pursues*" for "*presents*" in the extract from Prof. Markoe's work, it can only be said that the substituted word was a misprint, which escaped the notice of the reviewer in reading the proof-sheet; just as the name "Paulus *Ægiuitus*," in I. C. R.'s letter, is doubtless a misprint for "Paulus *Æginet*a." J. A., Jr.

2000 West De Lancey Place, Philadelphia, Dec. 7, 1872.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 17, 1872.

Dr. E. R. Peaslee, President, in the Chair.

Dr. L. D. Bulkley's Paper on Acne.

(Continued from page 548.)

The element of dyspepsia was also largely considered, which was recorded as distinctly existing in twenty-seven cases, while many more had its congeners, headaches, diarrhœa, flatulence, gastric derangement, disturbances of the urinary secretions, etc. These were stated to be of great importance in the causation of acne, as also powerful factors in other cutaneous affections. Tilbury Fox was quoted at some length, sustaining and urging this point. This dyspepsia must likewise be removed, and its dietetic treatment was considered in full. It is generally of the acid variety, and is most benefited by restriction of the starchy and saccharine substances, together with ale, beer and wine, also chocolate, fried substances, pastry, and coffee and tea in excess. The Doctor advises whiskey or brandy instead of wine and ales when a stimulant is necessary.

Exercise in the open air was dwelt on as all-important, the want of it being perhaps a frequent cause why females are more affected with acne than the opposite sex, also a reason why the disease is more common here than in England, as shown by the ratio of the cases here analyzed, being one hundred and eighty per thousand, those of Mr. Wilson but one hundred and sixty-seven in the same number.

Internal treatment—The writer does not consider arsenic valuable in the early stages of acne, having seen many cases injured by it, but regards this remedy as serviceable later, when the eruption is drier and less inflamed, as a tonic which has special action on the skin. Acetate of potassa was of service in many cases, in doses from fifteen to thirty grains, given in considerable water between meals. But he does not regard acetate of potassa as able to effect a cure of acne; tonics are afterwards required. Nitric and dilute phosphoric acids with vegetable bitters have yielded good results, as also Kissingen water, administered a pint before breakfast, the beneficial effects of which do not depend upon its purgative principles but upon its alkaline properties. Cod-liver oil was also recommended, with iodide of iron, in the scrofulous, and a mild mercurial course where there was any suspicion of syphilis.

The local treatment was summed up in few words, the writer having had success often with internal means alone, although he employs local means to hasten the cure. Most of those found in the text-books were of value, but he has had such good results from one taken from notes to the American edition of Cazenave, 1852, that he had not tried many of them. This one, so serviceable in his hands, is composed of sulphuret of potash and sulphate of zinc, each a drachm, to four ounces of rose-water. He had used collodion to endeavor to contract the dilated capillaries in acne rosacea, but without permanent effect; had also laid open the veins in the same with some good results. Iodide of lead ʒ j, in ℥ j, stramonium ointment, had been useful in reducing the thickening in indurated acne, and citrine ointment diluted three times had improved acne-rosacea. Juniper-tar soap he held to be of great value when there was not much inflammation; bi-chloride of mercury lotion had not answered the expectations which would be formed from its frequent use.

In conclusion, the speaker reiterated his belief in the internal causes and treatment of acne and deprecated a close specialism, which, by concentrating the attention on the local disease, neglects the general system; and, finally, he thought that dermatology was an inviting field, fascinating in its study and flattering in its successes, and that no one of all the cutaneous diseases was more encouraging in these respects than acne, nor was there any for the relief of which the patients could be more grateful.

On motion, the Academy adjourned to November 7th, when Dr. Bulkley's paper will be discussed.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 10, 1872.

Dr. A. L. Loomis, President, in the Chair.

(Continued from page 521.)

BENEFICIAL EFFECTS OF EARLY TREPHINING.

Dr. Leale exhibited a button of bone for the purpose of illustrating the benefits of early trephining of the cranium. The disk of bone was five-eighths of an inch in diameter:—A gentleman, aged 45, received a murderous blow upon the head, June 23, 1872. Within an hour he was seen by Dr. L., who found a lacerated wound of the scalp, four inches long, beneath which a fracture along the eminence of the left parietal bone, extending three inches. The depressed portion of bone was nearest the median line, and along its entire length was at least three-eighths of an inch lower than on the opposite side. A transverse incision was made, and the scalp raised; the requisite extent of bone was denuded of its periosteum, and the trephine so applied that three-fourths of the circumference of the saw was on one side of the line of fracture, and one-fourth on the other. This disk was easily removed, when it was found that the sharp cutting edge of the internal table had lacerated all the membranes, and had entered the gray substance of the brain. There also existed several blebs of sero-sanguinolent effusion which were duly evacuated. The depressed bone was then raised by the elevator, and the edges of the periosteum were approximated, the wound being dressed by an application of dilute solution of carbolic acid.

Before the bone was raised the patient had a flushed face, full pulse, the left pupil dilated to twice its size, and there was partial hemiplegia of right side—all of which symptoms disappeared at once after the operation.

The patient recovered without a bad symptom, and at the time of reporting the case the separated periosteum was commencing to grow new bone.

Dr. F. V. White believed such results to be very exceptional, in which opinion Dr. Mason concurred.

The Society then went into executive session.

Stated Meeting, October 23, 1872.

SPINDLE-CELL SARCOMA OF SHOULDER.

Dr. D. M. Stimson presented a scapula with a portion of the outer end of the clavicle which he removed the Friday previous, from a patient in the Presbyterian Hospital. The history of the case was, in brief, as follows:—

The patient was a healthy-looking farmer, aged forty-two. Two years ago he sustained a fracture of the right arm in its middle third, whilst in the act of throwing a stone. The fracture was treated by a regular physician, and the bone united. But he was never able to move the arm excepting by the actions of the biceps and the long head of the triceps. Shortly after the removal of the splints a tumor developed itself in the upper portion of the arm. Last January he presented himself to Dr. Parker, who diagnosticated the tumor as fibro-recurrent in character, and gave the patient to Dr. S. for operation. Accordingly, on the 5th of January Dr. Stimson removed the limb at the shoulder-joint. The growth proved itself to be an example of spindle-cell sarcoma, arising probably from the periosteum.

The patient did well until last July, when the growth reappeared in the stump. It grew very rapidly, necessitating another operation. Assisted by Drs. Crane, Sabine, and Ward, he removed the scapula with the outer two inches of the clavicle. The incision was made along the spine of the scapula, rounding downwards (so as to include none but healthy skin) to the lower border of the axilla, thence coming forward to the point of division of the clavicle. The scapula was detached from behind forwards, the clavicle divided with a chain-saw; and lastly the vessels in the axilla secured. The hemorrhage was very slight, the only ligatures required being one upon the main artery, and one or two others on the smaller vessels. The wound was closed in the usual manner.

Since the operation the patient has been doing very well; the pulse had never been over 103, and the temperature but once arose to 107° F.

A microscopical examination of the last growth showed it to be of the same character as the preceding one, with the exception that the cells were not so perfectly formed, and indicated a more rapid growth. The cells were mostly spindle-shaped, except in the centre of the softest masses, where they were rather round, a great many having undergone fatty degeneration. The intercellular substance, small in quantity, was granular rather than fibrillated.

NASO-PHARYNGEAL FIBROUS TUMOR—OPERATION.

Dr. Sands exhibited two specimens, the first of which was a naso-pharyngeal fibrous tumor (polypus) that was removed October 17, at the Roosevelt Hospital, from a young man aged 20, who was sent to Dr. Sands by Dr. Detmold. The patient stated that the tumor had been growing in the back of the throat for a period of three months; but careful cross-examination disclosed the fact that he had been troubled more or less with difficult breathing, especially through the right nostril, for two years. There seemed to be little doubt that the tumor had its origin at that time. The inferior margin of the tumor could be seen by looking into the patient's mouth and strongly depressing the tongue. The soft palate was very greatly increased in its vertical dimensions, extending over the front of the tumor, and projecting forwards, so that the plane of the organ, instead of being oblique or nearly horizontal, was almost vertical. The inferior margin of the tumor overhung the larynx and was quite close to it, although it did not produce at any time any difficulty in respiration. The face was unaltered by the presence of the tumor; there was no alteration in the position of the eyes, no disturbance of the vision, no prominence of the antrum, nor any flattening of the nose.

An exploration of the nasal fossæ showed that the left one was clear; but not so the right, at least one-third of which was occupied by the growth. The forefinger could be inserted between the palate and the front of the tumor, and also behind the tumor; but no pedicle could be reached, although by moving of the tumor between the fingers it was made certain that one existed. The vomer was strongly deflected to the left of the median line.

The operation for the removal of the tumor was begun by making a nearly median button-hole incision through the soft palate; but it was soon found that this was insufficient, and the incision was accordingly prolonged as far forward as the suture between the palate bones and the superior maxillæ. From the upper extremity of this incision another was made transversely to the right, towards the alveolar process. The flap thus formed corresponded above with the palatal plate of the right palate bone. In consequence of the thinning of the bony structure at that point, the section of the hard was simultaneous with that of the soft palate. The original incision was then prolonged downward so as to divide the soft palate completely, just to the right of the uvula. When the tumor was exposed, it was found that it could not be encircled by the finger; but it was soon surrounded by a ligature, which carried with it the chain of a small-sized écraseur.

The pedicle was found to be attached to the base of the skull, and to be an inch and a quarter in extent. It was soon discovered that the écraseur did not possess power enough, and it was replaced by a larger one. With this latter force was used and the chain broke. As this kind of procedure was not likely to succeed, the attachments were rapidly cut by means of a scissors curved flatwise. The tumor was found to have sprung from the basilar process of the occipital, at its junction with the sphenoid, and, as far as it could be ascertained, from the right wing of the latter.

Immediately after dividing the tumor there was a copious hemorrhage, which was at first not alarming, and was controlled by pressure of the forefinger. When the finger was removed, however, the bleeding became quite severe; various attempts were made to arrest it by the application of ligatures, with the help of Drs. George A. Peters and Detmold. At one time the bleeding-point was secured; but the ligature included so much fibrous tissue that it would not hold. Dr. Sands finally succeeded in passing a ligature by means of a curved needle, the subsequent arrest of the hemorrhage being in no small degree aided by a state of syncope into which the patient had twice fallen. The original intention was to sew up the soft palate, but the rough handling which this had experienced in the attempts to control the bleeding made its closure unadvisable, and this was deferred to a subsequent operation.

The progress of the case up to the time of reporting it had been good, the patient being able to sit up. The tumor was a trifle larger than a hen's egg, spheroidal in shape, and slightly elongated. Its inferior portion presented a triangular fissure, giving it a lobulated appearance. The tumor had not yet been examined microscopically, but Dr. Sands believed it to be fibrous in character. Its length was 3 inches; breadth, 2½ inches; thickness, 1¼ inch.

REMOVAL OF HALF OF LOWER JAW FOR MALIGNANT DISEASE OF THE PERIOSTEUM.

A second specimen shown by Dr. Sands was the half of a lower jaw, the seat of a tumor removed by surgical operation the day previous. The patient was a gentleman aged 47, who was referred to Dr. Sands by the President of the Society. About a year and a half ago this patient for the first time perceived a small swelling underneath the angle of the lower jaw, on the left side. He consulted a surgeon who was his family attendant, and that gentleman, either not appreciating the nature of the tumor or desiring to make light of it, gave the opinion that it was nothing but a swollen gland. A year passed by, during which time the growth increased, causing considerable anxiety to the patient and his friends. He then consulted Dr. Loomis, who referred him to Dr. Sands. At the time of their examination the latter gentleman felt that the tumor, which was then confined to the internal surface of the angle of the jaw, was of a suspicious character, and both were of the opinion that it took its origin from the periosteum. The patient was accordingly treated by iodide of potassium, and counter-irritation by mercurials, the latter employed in the manner known as Marshall's method. This treatment was not attended with any good result, the swelling increasing in extent. During Dr. Sands' absence from town the present autumn, the growth had changed its character; the soft parts external to the jaw had become implicated, the skin firmly adherent, and all the usual features of malignancy very distinctly developed. No secondary complications existed then, nor had been discovered since. The patient's symptoms soon became very pressing; and unwilling at first to entertain the proposition of a surgical operation, he consulted several other surgeons, Drs. Gurdon Buck, Markoe, and George A. Peters. All of these were unanimous in their indorsement of the original view of Dr. Sands. Dr. Sands had recommended an operation, not so much with the hope of ultimate cure as to alleviate the patient's sufferings, not the least of which was a rigidity of the jaw, the teeth not being separable more than a quarter of an inch. Deglutition had also become difficult and painful. Finally, the patient's condition had become unbearable, and he was resolved to run any risk rather than submit to it longer.

It was obvious that the operation would be a difficult one, and withal dangerous, in consequence of the complicated connections of the tumor, and it was deferred to the last moment.

After the patient was placed under æther, the operation was commenced by an elliptical incision, including the tegumentary adhesions of the tumor, extending from the lobe of the ear along the margin of the jaw to within half an inch of the median line of the chin. The upper flap, including the masseter muscle, was then dissected up, the buccinator muscle remaining intact, and the cavity of the mouth undisturbed. Dissection below was very carefully made, to avoid injury to any important blood-vessels. The facial artery did not bleed, but the facial vein, which was of large size, was tied with a double ligature and cut between. The left canine and first bicuspid were extracted; the section of the jaw was made through the gap thus left, and the mouth was opened by cutting through the buccinator muscle and mucous membrane. Dr. Markoe depressing and everting the bone, dissection was carried on very close to the tumor by means of a scissors curved flatwise. Although very careful to avoid wounding any important vessel, to the operator's disappointment a profuse hemorrhage occurred when the dissection of the internal face of the tumor was but half completed. This bleeding was temporarily controlled, and the remaining steps of the dissection completed. The divided vessel, which proved to be the external carotid, was then tied. This artery had been cut about a half-inch above its point of origin. It was also discovered that a slit had been made in a large vein, which all supposed to be the internal jugular. This opening was closed by a ligature applied around it laterally upon the vessel. The tongue was slightly involved, and with its diseased portion was also removed the gustatory nerve. The hypoglossal was also supposed to be cut. The internal carotid was exposed in the wound throughout its whole course up to the base of the skull, and the common carotid for an inch below the bifurcation.

On inspection of the specimen, the tumor was found to surround the jaw from a point an inch above the angle, extending beyond the angle anteriorly for some two inches. The tumor was very slightly movable upon the bone externally, but not on the inner aspect. No microscopic examination had been made. Dr. S. imagined that it was a cancerous tumor originating in the periosteum. During the operation the pulse did not exceed 88, and the patient, having been seen that evening, was able to swallow and to speak.

THE BRAIN IN UR.EMIA.

Dr. Van Geison presented a brain removed on the Sunday night previous from a girl aged fifteen years and six months. He was first called to see her on Friday evening, and found her in tonic convulsions, with the right pupil very much contracted and the left pupil very much dilated. Both pupils were wholly insensible to light. The respiration was irregular, somewhat rapid, and obstructed by mucous râles. The pulse was 88, and the temperature of the axilla 38° Cent. On inquiring into the history of the case it was learned that the child had menstruated for the first time a week before; that she had passed through the first period with very little difficulty, complained of no pain, and in fact it was only discovered by her mother by the presence of blood upon her clothes. As the patient was totally insensible, nothing could be learned from *her*.

On questioning the mother, it was ascertained that on the day previous to the one he saw her she had had a slight chill, which was followed by vomiting. On Thursday night they found her groaning in bed, complaining of considerable headache, and seemed to be partially insensible. They presumed that the child had night-mare, and after a while they left her.

On Friday morning she was perfectly sensible, and desired to go to school. She, however, stayed at home, sat up during the day, and retired early. About 8 o'clock in the evening she was again seized with vomiting, preceded by a chill, and at 10 o'clock had another groaning fit. Her mother, supposing she had another night-mare, went to her, and to her great surprise found her in convulsions. On arrival, Dr. Van Geison found the patient in the condition already described. He remained with the patient an hour, during which time there was no diminution of the convulsions, the pulse keeping at 88. About two o'clock in the morning the eyes became very much injected, the pulse rose to 180

and in five minutes she died, the pulse beating a few minutes after respiration ceased.

Under the circumstances, the Doctor was quite unable to make a satisfactory diagnosis. Uræmia was suspected because of the character of the convulsions, yet there was room for considerable doubt, considering the previous good health of the patient.

Her autopsy was granted upon the singular condition that only one cavity should be examined. That of the head, promising the best developments, was accordingly selected. On removing the brain its surface was found very much congested, the veins being very prominent. On removing the dura mater, a large clot was found at the posterior extremity of the longitudinal sinus, which, however, was evidently post-mortem. On raising the dura mater from the brain, he found upon the convex surface, surrounding the vessels as they dip down in the convolutions, just such appearances as are seen in the secondary inflammation in Bright's disease—a whitish margin, at first very distinct, and then shading off, and gradually losing its character altogether. The base of the brain was apparently healthy. At the time of examining the child he introduced a catheter into the bladder, but no urine flowed out. There was no evidence of any tubercular trouble.

His belief that this case was one of uræmia was strengthened by the fact that within the last two or three months he had met with two or three similar ones. He was called to see a lady aged 65, who appeared to have all the ordinary symptoms of cholera-morbus, and in addition was in an apparently unconscious state. Being somewhat in a hurry, he left her, but only to be recalled a short time afterwards to find her insensible and in tonic convulsions, in which condition she remained until death, forty-eight hours afterwards. Just before she died he introduced a catheter and drew off an ounce and a half of urine highly albuminous. This lady was in such good health previously, that she had frequently made her boast that she never had need to trouble the medical faculty. About a month after that he was called to see a gentleman aged thirty-five, who was supposed to have cholera-morbus. He found him with tonic spasms, and pupils very much contracted, and insensible. The patient had a stricture, and the obtaining of urine was not an easy or satisfactory procedure. The urine was albuminous, but as this was in part at least due to the presence of blood and pus, the microscope was brought into requisition, when casts were found.

Dr. Jacobi states that as a rule in patients who died of uræmia there was usually some œdema, and generally the pupils were in the same condition. When the latter was not the case, when there was a difference in the pupils, it was usual to find some local cause in the brain.

PERFORATION OF PULMONARY ARTERY INTO THE AORTA.

Dr. John C. Peters exhibited a very rare and interesting specimen of perforation of the pulmonary artery into the aorta. The patient was a gentleman aged thirty-nine, who died Oct. 20. He was exceedingly adverse to be considered an invalid, was very uncomplaining, and very much opposed to such physical examinations as might lead to a diagnosis. It was his custom to make all sorts of excuses for his illness and his sufferings; and his desire to consider himself in good health was so great that by the mere force of will he would make himself appear what he was far from being. About three years ago he made the remark that he was occasionally troubled with shortness of breath on going up stairs, and made the remark, of himself partially true, that if he smoked less and drank less he would be better. As he was not inclined to do either, he did not think that any physician could benefit him. He had no desire to know of any serious trouble that he might have, and made it his business to shun medical men.

In June of 1870 Dr. P. saw him going in bathing. The weather was not very cool, but immediately on entering the water he became intensely cyanosed, and had great difficulty of breathing. He came out of the water at once, when, by the aid of frictions and warm clothing, he recovered. About a month after, from exposure to cold, he was attacked with pleurisy of the right side, that chest being half filled with effusion. During an examination of the chest Dr. Peters noticed a faint murmur over the base of the heart, high up and indistinct. No opportunity was afforded, however, by the patient for any satisfactory analysis of the sound. He made a rapid recovery from his pleurisy, when he was urged to come to New York. He was then examined by Prof. Flint, who detected a direct and also a regurgitant aortic murmur. He was supposed to have insufficiency of the aortic valves. There was moderate enlargement of the heart.

About six weeks afterwards he had an attack of pneumonia, also in his right side; from this he also recovered. Winter before last he took a trip to Europe, and while there had several attacks of sickness, not, however, severe, and summer before last he was reasonably well. Last winter he made another trip to Europe, and while in Paris was seized rather suddenly with great difficulty of breathing, with some œdema of the legs, and moderate ascites. He partially recovered from this under active purging and the use of digitalis. He returned to New York in the spring with a diagnosis of aortic and mitral disease and enlargement of the liver. When Dr. Peters saw him again the enlargement of the heart was very great, but the evidences of it were somewhat masked by emphysema of the lung. There was also a slight ascites, and a little puffiness of the ankles. Although he had become a mere wreck of what he once was, and was quite feeble, his "pluck" compelled him to go down town every day to attend to his business. During last summer he went in the country, where he managed his own case, nothing being heard of him until he gradually became dropsical, his urine scanty and all further treatment, even in the light of an alleviation of his symptoms, was of no avail. During the last months of his life he could not obtain any rest in a recumbent position; and while he would sit for the greater part of the night in his chair, striving to doze for a few moments at a time, he would appear in the morning with nothing more than an allusion to the circumstances.

At the autopsy the heart weighed thirty-two ounces. The right lung was universally compressed and flattened, while the left lung was large and emphysematous. The liver was very large, the space one-half larger than usual. The kidneys were decidedly enlarged, and in a state of induration.

The valves of the heart were all sound. The aortic was somewhat dilated, and there was a small sacculated aneurism just above the right ventricle. In the pulmonary artery was a large patch of atheroma nearly two inches square. The pulmonary artery and aorta communicate with each other by means of a small perforation. The perforation seemed to commence in the former, as in one direction the edges were ulcerated, while on the other side they were rounded and smooth.

The pathological condition was a very rare one. In searching up the literature of the subject, he had found that Skoda had seen but one case, Swett none, Hope one, and Dr. Fletcher Roberts had reported one in the *Medico-Chirurgical Trans.*, vol. xxv.

(To be continued).

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